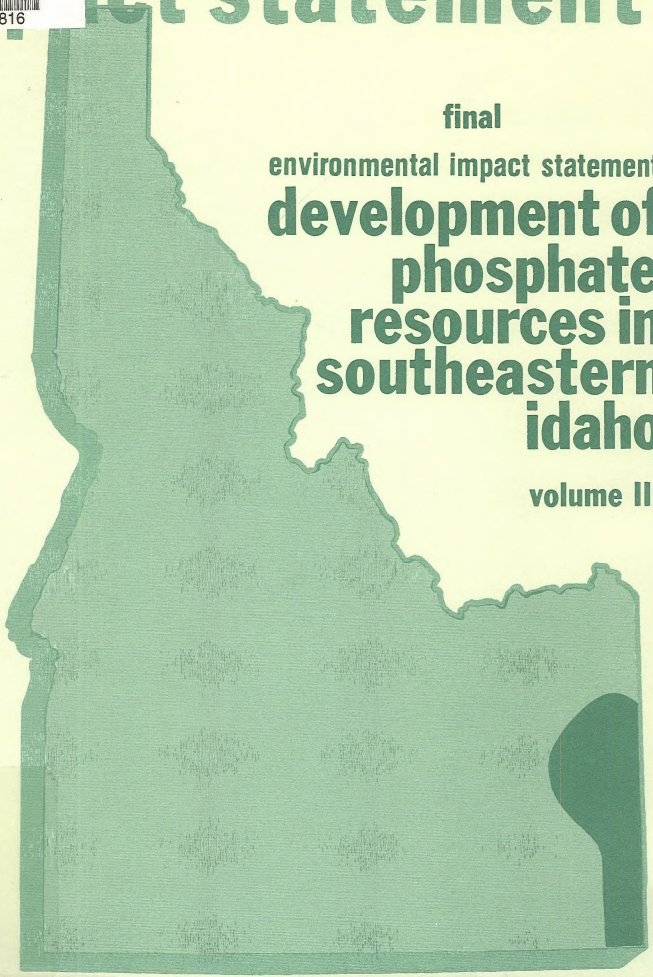
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FINAL

ENVIRONMENTAL IMPACT STATEMENT

VOLUME III

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DEVELOPMENT OF PHOSPHATE RESOURCES IN SOUTHEASTERN IDAHO

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GEOLOGICAL SURVEY (LEAD BUREAU)

BUREAU OF LAND MANAGEMENT

AND

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COMMENTS AND RESPONSES

Those agencies and organizations which assisted in the preparation of this document are listed in Part 1, Chapter IX.

The draft statement was made available to the Council on Environmental Quality and to the public on April 23, 1976.

We express our appreciation to all who reviewed the document and submitted comments on it. Ninety sets of written comments were received and 142 persons presented oral testimony at the public hearings. All relevant comments and testimony were considered in the preparation of this final statement.

A. PUBLIC HEARINGS

In preparation for the public hearings, a series of information meetings were held in Soda Springs, Pocatello, and Boise to acquaint people with the draft statement and to help them understand the review and comment process.

The public hearings were widely advertised by news releases, Federal Register notices, and by television coverage of the information meetings. Originally, the hearings were scheduled for early June in Pocatello, Soda Springs, and Boise. The Pocatello hearing started as scheduled on June 7, 1976. On June 8, the hearings were postponed due to the disaster of the Teton dam failure. Pursuant to announcement in the Federal Register, and appropriate news coverage and public announcement, the hearings were resumed in Pocatello, Idaho on September 7, 1976, and continued in Soda Springs on September 9, and in Boise on September 13.

The hearings on June 7 and 8 were presided over by Administrative Law Judge Michael L. Morehouse, Office of Hearings & Appeals, Department of the Interior. The hearing panel consisted of Herbert G. Stewart, Jr., Special Assistant for Environmental Conservation, Office of the Director, U.S. Geological Survey; William J. Schneider, Task Force Leader, U.S. Geological Survey; Adrian E. Dalton, Forest Supervisor, Caribou National Forest; and O'dell Frandzen, District Manager, Idaho Falls District, Bureau of Land Management.

The hearings on September 7 in Pocatello, Idaho and on September 9 in Soda Springs, Idaho were presided over by Gary V. Fisher, Administrative Law Judge, Office of Hearings & Appeals, Department of the Interior. The hearing panel consisted of Charles Albrecht, Environmental Impact Analysis Program, U.S. Geological Survey; William J. Schneider, Task Force Leader, U.S. Geological Survey; Glenn Bradley, Acting Forest Supervisor, Caribou National Forest; and O'dell Frandzen, District Manager, Idaho Falls District, Bureau of Land Management.

The hearings on September 13 in Boise, Idaho were presided over by Michael L. Morehouse, Administrative Law Judge, Office of Hearings & Appeals, Department of the Interior. The hearings panel consisted of Ray Peck, Deputy Assistant Secretary, Department of the Interior, in addition to those on the panel of the September 7 hearing.

Hearing testimony was reported by Tucker & Associates Court and Deposition Reporters, P.O. Box 1625, Boise, Idaho 83701.

Testimony of 142 persons was heard and entered into the record; written text submitted by witnesses in addition to their oral testimony was entered into the record.

Transcripts of the hearings (four volumes, 778 pages) are on file and available for inspection at the U.S. Geological Survey, 108 National Center, Reston, VA.; U.S. Geological Survey, District Mining Supervisor's Office, Pocatello, Idaho; and the Caribou National Forest Supervisor's Office, Pocatello, Idaho.

The following persons presented testimony at the public hearings. They are listed in order of appearance.

Public Hearings at Pocatello, Idaho
June 7-8, 1976

Jerry Olsen - Attorney at Law
Frank Hamill - Alumet
Robert B. Kayser - International Minerals & Chemical Corporation
A. R. Conroy - FMC
Robert V. Kimball - J. R. Simplot Company
Jack L. Smith - J. R. Simplot Company
John F. Cochrane - J. R. Simplot Company
George L. Atwood - Monsanto Chemical Company
Bob Naleid - Western Equipment Company
Jack Nielson - Self
Ernie LaMiller - Self
James R. Simmons - Self
Paul D. Christensen - Utah State University
Keith B. Campbell - Idaho Soil Improvement Committee
Thomas Hugues - J. R. Simplot Company
Jerry Rowe - International Association of Machinists & Aerospace Workers Local 1933
Richard Chojnacki - Dames and Moore
Michael R. Lamb - Emko, Inc.
Robert A. Lothrop - J. R. Simplot Company
Tom A. Blue - Stanford Research Institute
David Diehm - Esco Corporation
Ralph Maughn - Self
Duncan L. King - Stauffer Chemical Company
Paul Hill - Pocatello Chamber of Commerce
Dean Wendle - First Security Bank, Pocatello
Douglas Collins - Steel West, Inc.
Bill Balton - Electric Sales, Inc.
Patsy Reed - Idaho State University
Gary Cummings - Oil, Chemical and Atomic Workers, Local 2-632
Bill Gibbs - Paul Roberts Machine Shop
Keith W. Crandall - Bucyrus-Erie, Inc.
William R. Lancaster - Lakeshore, Inc.
Pat Ford - Self

Charles Blount - Idaho State University
John Howarth - Lower Valley Power & Light, Inc.
LaVaughn Haskett - Killian Plumbing & Heating, Inc.
Anthony Hamill - Self
Elden Reynolds - Self
Fred L. Rose - Self
Joseph J. Feeley - Self
Richard F. Farman - Self
Gerald A. Jayne - Self
Charles Burgess - Snake River Audubon Society
Karen Swafford - Self
Dale Hofhine - Idaho Building and Construction Trades Council
R. L. Swafford - Self
Rusty Adamson - Self
Bob Hill - J. R. Simplot Company
Mildred Oberlin - Idaho Conservation League
Lionel E. Oberlin - Self

Public Hearings at Pocatello, Idaho
September 7, 1976

Bruce A. Staples - Self
Rex F. Nielson - Utah State University
Sally M. Gibson - Self
Robert Truchot - J. R. Simplot Company
Willis L. Tarbet - J. R. Simplot Company
Patricia Getsinger - Self
Don Johnson - Idaho State University
Robert C. Winslow - Self
Russell A. Brown - Idaho Environmental Council
Vivian Null - Idaho Falls League of Women Voters
Virgil Moore - Self
Jay Engstrom - Self
Nyal Rydalch - Idaho Farm Bureau Federation
Jeffery Smith - Self
Donald K. Balmer - Shoshone-Bannock Tribes
Linda Burke - Self
George Hadley - Self
Bill Francis - Self
Sonja Weber - Self
Stan Lloyd - Self-employed rancher
Irene M. Nautch - Self
Ralph Maughan - Idaho State University
Evan J. Tibbott - Self
Mary Revello - Idaho State University
Seth R. Ellis - Self
Jay E. Anderson - Self
Jack L. Smith - J. R. Simplot Company
Ron Green - Self
Charles Trost - Portneuf Audubon Society
Jerry Sheid - Self-employed rancher

Public Hearings at Soda Springs, Idaho
September 9, 1976

Elaine Johnson - Caribou County Commissioners
Larry Raymond - J. R. Simplot Company
Mark Steele - Caribou County Sun
Russell Westerburg - State Legislator
Lawrence E. Smith - Beker Industries, Inc.
Gordon Aland - Monsanto Chemical Company
Charles Davis - Monsanto Chemical Company
William Schmitt - J. R. Simplot Company
John Walters - Idaho Building Construction Trades Council
Steve Jenson - Teamsters Local 983
Neal Stephenson - Bangs Office Products
Guy Thorne - Self
Barry Benson - Self
Michael Loviza - Self
Dennis Eggleston - Western Equipment Company
Elaine Johnson - Self
Robert E. Anderson - Caribou County Commissioners
Sal Mascarenas - Jelco, Inc.
Kenneth J. Wood - Walker Engineering Company
Leslie Walker - Walker Engineering Company
Robert Hurren - Parson Ready-Mix
Frank Hamill - Alumet
James Viellenave - Alumet and Earth Sciences
Judy Stoor - Self
Ray Nelson - Self
Jerry Wray - Self
Joe Wolfe - Paramount Supply Company
Mike Panting - Self
Doris Phelps - Alumet
Roger Hunter - Self
Bill Connel - John Birch Society
Val Steele - Self-employed rancher

Public Hearings at Boise, Idaho
September 13, 1976

Governor Cecil D. Andrus - Governor of Idaho
Darrell V. Manning - Idaho Transportation Department
Robert L. Salter - Idaho Fish & Game Department
Lee W. Stokes - Idaho Department of Health & Welfare
R. Keith Higgenson - Idaho Department of Water Resources
Terry S. Maley - Idaho Land Department
William Hagdorn - Idaho Parks & Recreation Department
Kenneth Stolz - Idaho Bureau of State Planning & Community Affairs
Sheryl Chapman - Idaho Water Users Association
A. J. Teske - Idaho Mining Association
Karl Baur - Pacific Supply Cooperative
P. K. Harwood - Idaho Association of Commerce & Industry
Robert W. MacFarlane - AFL-CIO
George L. Atwood - Monsanto Chemical Company
Jim Viellenave - Alumet & Earth Sciences, Inc.

Frank Hamill - Alumet
Burton I. Lipshay - Self
Oscar Field - Idaho Farm Bureau Federation
John R. Sunnygard - Union Pacific Railroad
J. Preston Jones - University of Idaho
William Mauk - Idaho Conservation League
John G. Aronson - Ecology Consultants
Ben D. McCollum - J. R. Simplot Company
Keith B. Campbell - J. R. Simplot Company
Keith Gressley - Baker Production Credit Association
Edwinn M. Wheeler - Fertilizer Institute
Burdett Bernhardt - Western Equipment Company
Thomas Hugues - J. R. Simplot Company
Dennis Russell - Self
Keith Crandall - Bucyrus-Erie Company

Those who testified at the hearings addressed many significant issues. A large number of these same issues were also raised in written comments submitted during the review period. These are addressed with the written comments and are not covered here.

A large number of comments dealt with issues such as "is mining a valid use of land?" or "the basic reason to mine is to provide jobs or help certain businesses" rather than substantive comments on the content of the EIS. No response is included for topics of this nature.

People from many backgrounds were critical of the level of production portrayed by the EIS (30 million tons per year by 2000). The Task Force, however, was mandated to evaluate the impacts of the mining plans as submitted for approval. At the hearings, and in written comments to the Task Force, the eight companies presented to the Task Force revised production and processing schedules substantially revised downward from those originally presented. Accordingly, in the final EIS the Task Force added an analysis of the impacts of this more probable level of production.

General comments on the DES varied from "glossed over the impacts too lightly" to "portrayed the impacts to be more serious than will be the case"; from "defensive of wildlife" to "portrayed the impacts in a straight-forward objective manner"; and from "an excellent job of completing a monumental task in a timely manner" to "inadequate in many respects". A large number of comments duplicated those offered by others.

The significant comments not covered in the written response section follow:

Comment

The IMC mine is postponed indefinitely. FMC projects a growth rate of 2% to 2.7%. FMC won't mine in Dry Valley until early 1990's and won't build a beneficiation plant or increase annual production. Monsanto won't increase production in foreseeable future.

Response

These and many similar comments are covered by the presentation of the lower, more probable production rates in this FES.

Comment

The DES does not show the value of mining, processing, and related activities. Neither does it show the secondary benefits regionally, nationally or world wide.

Response

These items are discussed in the DES to the extent necessary. The role of phosphate in the national, regional, and local economy, the value of the phosphate industry, and its role in the economy of southeastern Idaho are all discussed in the DES.

Comment

Neither the Lanes Creek or Pritchard Creek operations were addressed.

Response

The Lanes Creek mine is on private land and is not on a Federal leasehold. No Federal action is pending. The Pritchard Creek operation was excluded because it was only exploration work on an existing lease. No mining plan was filed.

Comment

Why didn't the Task Force evaluate the impacts of more rapid growth in production such as 7% to 10%?

Response

Separate market analyses performed by Stanford Research Institute, U.S. Bureau of Mines, Union Pacific Railroad Co., and several other firms agree that production will probably not exceed a growth rate of 3 to 3.5 percent. There appears no logic in a projection as high as 7% or 10%.

Comment

Why does the statement indicate laws will be violated?

Response

Certain air and water quality laws allow absolutely no degradation. Even though operations are designed to comply with these laws, the Task Force felt a need to point out that some unforeseen actions or accidents are almost certain to occur. These could cause temporary violations of laws. The text has been modified to more accurately reflect this concern.

Comment

Mine dumps can be stable at a slope of 2:1. Why require 3:1?

Response

Experience and research have adequately demonstrated that reasonable vegetative cover is very difficult to establish unless the slopes are flat enough for mechanical means of cultivating and seeding. Slopes steeper than 2:1 inhibit the use of such mechanical equipment.

Comment

What is the basis for wildlife numbers and impact assessments?

Response

The Task Force relied heavily upon the Idaho Fish & Game Department for wildlife population estimates.

Comment

Why didn't the Task Force prepare an individual EIS for each mine instead of one overall EIS for the region?

Response

Actually the Task Force did both. Parts 1, 2, and 3 deal with the overall impacts of the mining, prospecting, leasing, and transportation system on a regional basis. Parts 4 through 11 deal individually with the impacts of each separate mine plan on a site specific basis.

Comment

We see a wide variety of game and other wildlife near the mines daily. We don't believe mining has an impact on them.

Response

It is true that some animals seem to adapt well to mining activity. Biologists believe that these adaptable animals may represent a minority of the population and the more timid ones are seriously impacted.

Comment

Why was the North Trail mining plan included?

Response

Although production is very small, the mining plan nevertheless covers operations on a Federal leasehold and therefore required Federal action.

Comment

The projections of jobs, population and socioeconomic impacts are too high.

Response

Based upon the plans that were submitted, the projects were the best that the Southeast Idaho Council of Governments could estimate. Based upon the lower, more probable level of production, these projections have been very significantly reduced in the FES.

Comment

The projection of electrical energy requirements is too high.

Response

These high projections were based upon Monsanto's indication that it would triple production by the year 2000. Cancellation of these expansion plans have now reduced the additional electrical energy requirements from 270 megawatts to 37 megawatts.

B. WRITTEN COMMENTS

In addition to the testimony received at the hearings, the Task Force received 90 sets of written comments from a wide variety of sources, including Federal, State, and local agencies, industry, environmental groups, and interested individuals. In these 90 sets of comments, there were 1,176 substantive comments relating to the content of the DES. These written comments and the Task Force responses to the substantive issues relating directly to the DES follow.

Comments were received from the following Federal agencies:

Department of the Interior:

- Bureau of Mines
- Bureau of Reclamation
- National Park Service
- Bonneville Power Administration
- Office of Trust Responsibilities

Other Federal agencies:

- Department of the Army, Corps of Engineers
- Department of Health, Education and Welfare
- Department of Housing and Urban Development
- Department of Labor
- Environmental Protection Agency
- Energy Research and Development Administration
- Nuclear Regulatory Commission

Comments were also received from the following State agencies:

State of Idaho:

- Governor Cecil D. Andrus
- Bureau of State Planning and Community Affairs
- Department of Agriculture
- Department of Fish and Game
- Department of Lands
- Department of Parks and Recreation
- Department of Water Resources
- Transportation Department
- Public Utilities Commission
- Department of Employment
- University of Idaho, College of Agriculture
- Office of Aging
- Idaho State Historic Society
- Idaho State Historic Society

State of Wyoming:

- State Engineer's Office
- Department of Environmental Quality

State of Utah:

State Planning Coordinator
Department of Development Services

Comments were also received from the following applicants and/or their representatives:

Alumet
Walker Engineering (Alumet)
Beker Industries
Earth Sciences, Inc.
FMC Corporation
Monsanto Industrial Chemicals Co.
J. R. Simplot
Dames and Moore (J. R. Simplot)

Comments were also received from the following organizations and companies:

Pickens Electric Plumbing and Heating
Allied Steel Erectors, Inc.
Pocatello Supply, Inc.
Norman Supply
C. W. Mulhall, Real Estate
Idaho Building and Construction Trades Council
Western Idaho Production Credit Association
Outdoors Unlimited
International Engineering Company, Inc.
Student Union, Idaho State University
Baker Production Audit Association
Utah County Wildlife Federation
Department of Biology, Idaho State University
Environment West Research and Planning, Inc.
Koofenai Environmental Council
Friends of the Earth
Snake River Audubon Society
Idaho Association of Commerce and Industry
Star Studs Co.
Soda Springs Chamber of Commerce
National Wildlife Federation
CH2M-Hill
Friends of the Earth and Defenders of Wildlife
Wildlife Society, Idaho Chapter
League of Women Voters

In addition, comments were also received from the following individuals:

Mr. and Mrs. Dave Carson
Leo M. Knudson
Verna Brown
Gail O. Clark
Elvera T. Slansky
James Phelps
Peter M. Mourtsen
Patsy B. Reed
Donna Guilford
J. S. Spalding
Thomas E. Horobik
Robyn Lea Willey
John Ball
Waldo G. Kell
Mark Tovey
Karen Swafford
Lance O. Perkins
Dale M. Snyder
Lynn Householder
Steve Spencer
Richard T. Rossiter
John E. Hartman
Gerald A. Jayne
David and Vivian Null
Marcus J. Gibbs, et al
Curt Doffelt
J. H. McFadden
Douglas B. Winterowd
John Meredith
M. D. Lauman
Preston Phelps
Doyal Stiles
Val M. Steele
Merle L. Newell
Russell J. Hayden
Robert N. Whittemore
Glenn R. Johnson

United States Department of the Interior

BUREAU OF MINES
WASHINGTON, D.C. 20240

July 14, 1976

Memorandum

To: Director, Geological Survey

From: Director, Bureau of Mines

Subject: Draft environmental statement, Geological Survey Task Force, Development of Phosphate Resources in Southeastern Idaho

The preface of this environmental statement, Development of Phosphate Resources in Southeastern Idaho, states that the phosphate mining industry in the Western United States will increase production by a factor of three within 5 years. It is reported that from a production level of about 6 million tons in 1975 annual production from existing and new mines may exceed 15 million tons by 1980.

Statements that Florida production will peak in the next 5 years and decline thereafter are made to reinforce the premise that production in the Western United States will expand to 15 million tons by 1980 and to 20 million tons by 1990. This forecast is in serious disagreement with the forecast made by the Bureau of Mines that is included on page 1-27 of the EIS. The Bureau of Mines forecast indicated that the total production of Western States phosphate rock would be about 8 million tons in 1980 and that the field could support a production level of 15 million tons by 2000 if the export market could assimilate the tonnage in excess of the estimated domestic demand of 6-7 million tons in 2000. The Bureau of Mines forecast was made in 1974, a year when panic buying of phosphate fertilizer triggered plans by U.S. companies as well as world producers to move as quickly as possible toward construction of new plants to meet the apparent strong and endless demand for phosphate fertilizers and chemicals. When this demand collapsed in 1975, most of the expansion plans were canceled or modified, and, in the process, reaffirmed the forecast made by the Bureau of Mines.

It is apparent from the EIS and from discussions with operating companies in the Western States that the companies were required to list any and all properties that they might wish to mine in the years ahead so that all potential operations could be included in the EIS. If not included such

operations might understandably be assigned low priority for future consideration of mining permits. The totaling of all prospective operations, Table 1-1, page 1-4, resulted in a mine-by-mine production forecast that is unrealistic and should not have been used as the one and only case on which to base the EIS.

Recent discussions with producing companies and those with phosphate properties previously considered for new production, reveal that none have major expansion plans through 1980. Some expansion however may develop commensurate with domestic and export markets for fertilizer and formulated detergents.

Consequently, the extent of environmental impacts based on incorrect estimates of mine expansions are in themselves incorrect. Without the mine expansions, the impacts will proportionately be reduced or will not exist.

Because of the failure to recognize no expansion or a "most probable case," no alternatives are considered or offered to compare with the one case of maximum expansion. The final EIS should be modified to include at least one comparative case based on the most probable development level of 8 million tons by 2000, or at least make it abundantly clear that only the maximum development case has been discussed and that the environmental impacts will most probably be much less than described. In short, the EIS does not recognize the changeability of output patterns that will be dictated by worldwide markets and production as well as curtailment of agriculture and chemical uses in the United States. Otherwise, the draft EIS appears to be complete and objective.

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14

Director

1. The manuscript has been amplified to include a "more probable" level of mining of 15 million tons per year by the year 2000 as developed from industry estimates of production. The most recent Bureau of Mines supply and demand forecast of May 1977 has been included in the text.

United States Department of the Interior

BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

IN REPLY
REFER TO: 150
120.1

JUL 23 1976

Memorandum

To: Director, Geological Survey
Acting

From: Commissioner of Reclamation

Subject: Review of Draft Environmental Statement for Development of Phosphate Resources in Southeastern Idaho (DES 76-15)

We have reviewed the subject document and have the following comments.

1. The overall approach to the presentation of the private proposals makes review difficult. The proposals are generally described as presented in the developers' applications, with the assumption being that the "proposed action" is the approval of all of these plans by the appropriate Federal agency. The managing Federal agencies have considerable discretion, however, in their actions on the mining activities, as outlined in "Alternatives" (page 1-495 ff) and elsewhere. The reviewer is given little insight into which of these alternatives, if any, the managing agencies may actually be considering, and, as a result, he is not sure what the "proposed action" of the Federal agency actually is.

2. The availability of electric power may be a constraint on additional processing. A more comprehensive discussion of power availability and the potential impacts in the power-producing area would be useful (page 1-8).

Other areas which should be expanded include the following.

3. Comparative data on state and national averages for contrast should be added to the socio-economic discussions. This would help the reader to assess the magnitude and severity of the impacts associated with the development of the phosphate resources.

4. The statement lacks an in-depth analysis of the impacts on water quality and land use. The generality of the discussion does not provide the type of information concerning impacts which would enable the reader to determine the severity of impacts.

14

1. A full listing of alternatives under consideration are listed in Part I, Chapter VIII, pages 1-495-532 of the DEIS, and in the chapters on alternatives in subsequent parts. All of the alternatives are under consideration. Those developmental activities listed on pages 1-3 through 1-11 of the DEIS which require specific approval have now been identified in the text.

2. A more thorough discussion has been added to the text.

3. Adding State and National averages would only obscure the impacts upon Southeast Idaho due to phosphate expansion. For example, adding 12,000 people in Washington D. C.'s population base would hardly be worth mentioning; however, adding 12,000 people to Soda Springs, which has approximately 3,000 people and is Caribou County's largest city, is bound to have a drastic impact and therefore is worth mentioning.

4. The large number of factors involved in determining water quality have limited most strictly quantitative estimates of severity of water quality impacts. We have attempted to estimate this relative importance of the various factors based on existing data and chemical principles.

Much of the "Mitigating Measures" (page 1-420 ff) section consists of a discussion of laws and regulations which, if enforced, will limit or mitigate the adverse impacts of the proposed activities. In view of the combined size of the planned increase in activity--2 or 3 times present levels within a few years--a discussion of the feasibility of actively enforcing these laws with reasonably anticipated levels of State, local, and Federal enforcement personnel would be useful.

5

The mitigation measures in the socio-economic area are potential solutions, but there is no indication of any commitment to those solutions.

6

Since the area under consideration lies in two of the Bureau of Reclamation's regions, the following comments pertain to the Snake River drainage and the Bear River drainage, respectively.

Snake River Drainage

Some environmental damage from return flows into Blackfoot Reservoir, Ririe Reservoir, and Grays Lake is a possibility. Volume 2, Mining Plans, should be more complete on return flows into the above-named reservoirs.

7

Page 1-388, 3rd full paragraph states that about 74,000 acre-feet of water will be required annually for phosphate processing. It is not clear how much of this is surface water or how much would be in the Snake River basin. The subsequent statement that this water need plus related needs "... may require reallocation of irrigation water, the quality of which could be severely degraded ..." probably understates the potential environmental, legal, and social problems since many Snake River tributaries in the study area are already overappropriated in dry years.

15

8

Bear River Drainage

Only three of the sixteen proposed mining projects are located in the Bear River surface drainage area. The Paris-Bloomington Project is entirely within the Bear River basin. The Swan Lake Gulch and Middle Sulphur Canyon projects have their major portions in the Bear River drainage, and the remainder in the Blackfoot River basin.

The thirteen other projects are in the Blackfoot River basin and would not directly affect the surface flow of Bear River. There is, however, considerable ground water movement from the Blackfoot basin into the Bear River basin in the vicinity of Soda Springs. Consumptive use of ground water in the Blackfoot basin would deplete the water

9

5. The Task Force can only assume that existing laws and regulations will be enforced. The professional staff of the Conservation Division, USGS, in Pocatello, which is responsible for enforcement of Federal regulations governing mining of the Federal Mineral estate, recently has been tripled. The Division of Environment, Idaho Department of Health and Welfare currently actively monitors air and water quality, and the Southeast Idaho Council of Governments is actively pursuing a State 208 Water Quality program for Caribou and Bear Lake Counties.

6. Commitments to these potential solutions can only be made by those agencies and/or organizations with authorities and responsibilities in these areas.

7. We agree that mining plans should be more complete on return flows into Blackfoot Reservoir. Such details will be necessary for consideration of approval under existing regulations. Some environmental damage from return flows is probable. Volume 2 is replete with references to environmental impacts to the tributaries of Blackfoot as well as they can be determined with available data. However, impacts from return flows into Blackfoot Reservoir cannot be fully assessed with presently available data. Presently available data do not indicate significant impacts to Willow Creek basin (Grays Lake and Ririe Reservoir). None of the mining plans are in the Grays Lake or Ririe Reservoir drainage basins. Interbasin movement of return flows from mining and processing operations are not probable, inasmuch as Grays Lake is higher in elevation than Blackfoot Reservoir. Yields per square mile is greater into Blackfoot Reservoir than into Grays Lake even though the drainage basins have similar elevations. If there is interbasin movement, it would appear more likely to be from Grays Lake into Blackfoot Reservoir.

8. More than half of this projected water use would be in the Snake River basin and most of this would be from ground water sources. The potential environmental and social impacts are discussed in the DEIS; the legal impacts that may evolve from the proposed water use is beyond the scope of the DEIS.

9. The maximum projected water demand in the Bear River drainage, due to the phosphate industry-including processing, mining, and population growth is about 35,000 acre feet a year. This projection assumes mining and processing of 20 million tons of ore a year and a Bear Lake County population growth of 4,900.

Consumptive use of ground-water due to mining in the Blackfoot River basin probably would have little effect on ground-water movement into the Bear River basin.

supply to the Bear River at Soda Point. The magnitude of this depletion and the depletion from consumptive use in the Bear River basin has not been determined. The Bear River Project proposed 20,000 acre-feet of industrial water for phosphate development in the Soda Springs-Montpelier area, thus that amount of depletion could occur without affecting the downstream requirements of the Bear River Project.

9

The change in water quality and increased sediment load may be confined largely to local tributaries and may not extend significantly to the Bear River main stem, but more specific data, especially on the cumulative effects, would be necessary in making this determination.

10

Also discussed are the municipal water requirements. The population increase is based on 2.75 persons per new job created. This multiplier may not hold true for indirectly created jobs, because their income level is such that they tend to be filled by other than heads of households. At the same time, the estimated per capita use of 600 gallons per day is extremely high, especially considering that mobile homes and multi-family units are projected to house 75 percent of the in-migrants until 1980 and 35 percent of them beyond that date.

11

Lincoln County, Wyoming, mentioned only briefly in the statement, is involved in other projects besides the Bear River Project. The description presented may fit the northern portion of the county, however, it does not fit the entire county. The source of the population projections is not cited and they exhibit the opposite trend from those being currently used and accepted within the area. The importance and growth of the Kemmerer mines and plants are not fully presented. Unfortunately, the potential impacts on this county are not discussed.

12

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EF Sallee

10. More data on sediment transport and quality of water in the Bear River are being obtained by various agencies.

11. The daily per capita use of water is based on figures supplied by water departments of Pocatello and Soda Springs. The figures are very high, but are valid for present use. Future use may be somewhat less if housing types change significantly; a statement to this effect has been added to discussion of water use in the FES.

12. See comment 12-2. The impact of Coal mining on Lincoln County is not considered germane to this EIS.

United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO:

L7619

JUN 23 1976

Memorandum

To: Director, Office of Environmental Project Review

Through: Assistant Secretary for Fish and Wildlife and Parks

From: Acting Associate Director, Park System Management

Subject: Draft environmental statement, development of phosphate resources in southeastern Idaho (DES 76-15)

In response to your memorandum of April 26, we have reviewed the subject document and have the following comments.

17

1 We wish to emphasize the need for thorough archeological investigation of the proposed mining sites. We also strongly urge that the measures suggested by the State Historic Preservation Officer and the State Archeologist be followed.

Raymond L. Freeman

1. Thorough archeologic investigations of proposed mining sites will be required. See page 1-454 of the DES.

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

United States Department of the Interior
BONNEVILLE POWER ADMINISTRATION
P.O. BOX 3621, PORTLAND, OREGON 97208

OFFICE OF
THE ADMINISTRATOR

RECEIVED 6/1/76

In reply refer to: AJ

May 27, 1976

Memorandum

To: Interagency Task Force, Geological Survey, Pocatello, Idaho

From: E. Willard, Assistant to the Administrator - Interagency Relations

Subject: Review of Draft Environmental Statement -- Development of Phosphate Resources in Southeastern Idaho

Per your request we have reviewed subject statement and offer the following comments:

18

Subject statement reviews the existing environment of the southeastern Idaho phosphate area and itemizes and evaluates the individual and cummulative environmental impact of proposed phosphate mining and processing developments. The largest part of the report is concerned with the environmental impact of mining, hauling, and processing of phosphate resources of this area; therefore, we can offer little comment or direct input to a major part of this impact study.

The report appears well prepared, detailed, and comprehensively covers the specific proposals for developing these resources. We have no significant comments regarding either the scope or content of the study. Proposals for development are those of firms holding valid phosphate leases on Federal lands in this southeastern Idaho area. Anticipated development is somewhat greater than had been previously projected for this area, and the projected
1/ production rates appear to be optimistic in view of recent developments in elemental phosphorus industry.

1. An analysis of impacts at a "more probable" level of 15 millions tons by the year 2000 has been added to the manuscript. This more probable level was developed from U.S. Bureau of Mines estimates from market analyses by Stanford Research Institute and Union Pacific Railroad, and from revised estimates of production from the companies.

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

Memo to Interagency Task Force, Geological Survey, Pocatello, Idaho; Subj: Review of Draft Environmental Statement -- Development of Phosphate Resources in Southeastern Idaho

A Bonneville Power Administration customer, Lower Valley Power & Light, Inc., is to serve one of the major developers of the phosphate resources of this area (Alumet, Inc.). Lower Valley Power & Light, Inc., has estimated
2. that an additional 28-30 megawatts of power will be needed to serve the Alumet phosphate operation between 1977 and the year 2000. The electric power will be used in mining and beneficiating the phosphate prior to shipment to Alumet's plant in Utah for manufacturing phosphate fertilizers.

The following are specific comments concerning the draft manuscript:

3. Vol. I, P. 1-306: The Stauffer Chemical Co. electric load as shown in paragraph 2 appears low. Present Stauffer capacity load at Silver Bow, Montana, is 70 megawatts.

4. Vol. I, P. 1-266: The ferrophosphorus production shown for Monsanto appears low when viewed in terms of the relative phosphorus production by Monsanto and FMC Corp.

5. Vol. I, P. 1-488: Insert the word "million" after the number 282 in line 4 of paragraph one.

6. Vol. II, P. 9-1: We would suggest changing the wording in line 7 to indicate that the ferrophosphorus is "processed" in the Kerr McGee Vanadium plant rather than "recovered."

We appreciate the opportunity to review and comment on this draft.



2. In the initial mining plan submission, Alumet had shown possible electrical supply routes from both Utah Power and Light Company and Lower Valley Power and Light, Inc. systems. Recently Alumet finalized an agreement with Lower Valley Power and Light, Inc. to supply the electrical requirements for both the mining operation and beneficiation plant in the Diamond Creek drainage. The manuscript has been changed accordingly.

3. The data have been corrected.

4. These are actual company production figures. The relative ferrophosphorus production when viewed in terms of relative phosphorus production recorded by different operators can be misleading since recoveries vary significantly with the iron content of the different feed materials. Although differing process control procedures can also have a pronounced effect on ferrophosphorus recoveries between different company operations, the available iron contained in the respective ores will normally have the greatest effect on relative recoveries.

5. Manuscript has been corrected.

6. The manuscript has been changed accordingly.

OPTIONAL FORM NO. 10
JULY 1973 EDITION
GSA FPMR 101-CFR 101-11.6

UNITED STATES GOVERNMENT

Memorandum

Trust Facilitation
BQ

TO : Director, Geological Survey
Reston, Virginia

DATE: JUL 23 1976

FROM ACTING Director, Office of Trust Responsibilities

SUBJECT: Review and comments of Draft Environmental Statement on the Development of Phosphate in Southeastern Idaho (DES 76/15)

The above subject DEIS has been reviewed from the standpoint of jurisdiction and expertise of the Bureau of Indian Affairs and the following comments are submitted:

Chapter II. B. 1. "Land Use." Page 1-234

1. The following additional paragraphs should be added to the present section:

"The Shoshone and Bannock Tribes of the Fort Hall Reservation, through the Treaty of Fort Bridger on July 3, 1868 and ratified by the United States Senate on February 16, 1869, ceded lands to the United States." The study area lies within the ceded area.

A follow-up agreement with the Shoshone and Bannock Indians of the Fort Hall Reservation, concluded February 5, 1898, ratified June 6, 1900 (31 Stat. 672) states in Article IV of the Act to ratify the agreement (31 Stat. 674) as follows:

> "So long as any of the lands ceded, granted, and relinquished under this treaty remain part of the public domain, Indians belonging to the above-mentioned tribes, and living on the reduced reservation, shall have the right, without any charge therefor, to cut timber for their own use, but not for sale, and to pasture their livestock on said public lands, and to hunt thereon and to fish in the streams thereof"

These treaty rights continue to exist in the study area.

1. The statements have been added to the text.

20

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

Chapter II. B. d. "Controls and constraints." Page 1-276

In the Federal Control Section, before "State Controls" the following should be inserted:

"e. Bureau of Indian Affairs

Lands withdrawn from the public domain for reservoir purposes for Grays Lake and Blackfoot Reservoir have surface use rights administered by the Bureau of Indian Affairs. Permits or leases are entered into for grazing, farming, public use sites, concessions, and other purposes.

Some of the land in the Grays Lake area is dedicated for both reservoir and wildlife refuge purposes. Surface use of these lands is governed by an agreement between BIA and USFW, with permits issued by the agency responsible for the specific land to be permittted."

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT, CORPS OF ENGINEERS
BLDG. 602, CITY-COUNTY AIRPORT
WALLA WALLA, WASHINGTON 99362

NPWEN-PL

23 July 1976

Director
U.S. Geological Survey
National Center
Mail Stop 108
Reston, VA 22092

Dear Sir:

We have reviewed the Draft Environmental Impact Statement for the Development of Phosphate Resources in Southeastern Idaho. The statement was brought to our attention and a copy was forwarded to us by the Environmental Protection Agency, Region X, Seattle.

22

1 The Environmental Impact Statement does not recognize the need for any of the mining companies to file for a Section 404 Permit. It is the responsibility of the U.S. Army Corps of Engineers to regulate the disposal of dredged or fill material. This authority comes from the Federal Water Pollution Control Act Amendments of 1972. Section 404 of that act charges the Secretary of the Army, acting through the Chief of Engineers, to regulate the discharge of dredged or fill material in the waters of the United States.

Phase 1 of this program began in July 1975 and extended the Corps regulation of disposed, dredged, or fill material to the traditional navigable waters of the United States and contiguous or adjacent wetlands. Phase 2, which recently became effective on 1 July 1976, expanded the Corps permit program into primary tributaries of navigable waters of the United States, lakes, and other contiguous or adjacent wetlands. After 1 July 1977 the Corps will exercise its Section 404 authority over all waters of the United States.

1 It appears that some of the activities associated with the proposed mining developments in southeastern Idaho will include the deposition of fill material into the nation's waterways. To make Section 1, "Federal Control," page 1-270 of the statement, complete it is suggested that a section be included concerning the issuance of a 404 Permit by the Corps of Engineers. Inclosed is a pamphlet concerning the Section 404 Permit Program.

1. Reference to section 404 permits has been added to page 1-426.

NPWEN-PL 23 July 1976
Director, U.S. Geological Survey

The alteration of stream channels or the conversion of certain areas of the channel to conduits such as described on page 1-342 of the statement, combined with the clearing of vegetation and other disruption of the landscape, will cause a greater rate of runoff in these small streams which will eventually have some effect on the lower areas of the Blackfoot River and other streams affected.

2 The maintenance of dump sites on perennial streams and the considerable runoff and flow such as those mentioned on page 9-98 have the potential to cause negative water quality impacts. Therefore, the statement on page 9-99 under "Water Quality" which indicates that the sediment increase and possible nutrient enrichment to the Blackfoot River will be insignificant does not appear to be accurate. This comment also applies to the other drainages being considered by the mining companies.

Considering the statement on page 1-438 that "even with the best known methods available today the aquatic fisheries resources may be inadvertently impacted and Federal, State and county laws will be violated," and realizing the Corps of Engineers' responsibility for the issuance of Section 404 Permits in relation to eventual effect on water quality, we find that the potential effect is substantial. Therefore, each instance of fill material in a waterway would have to be investigated individually by the appropriate personnel in the Walla Walla District to determine whether or not a Section 404 Permit would be issued. An abandonment program and dam safety data would be necessary to this investigation.

23

1 Incl
As stated

EDWARD H. CHORLTON, LTC
LTC, CE
Acting District Engineer

2. The statement on page 9-99 modified to read, "... the sediment increase and possible nutrient enrichment may be slight."

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF

SPKED-W

23 July 1976

Director
US Geological Survey
National Center
Mail Stop 108
Reston, Virginia 22092

Dear Sir:

The Environmental Protection Agency requested our District to review the draft environmental impact statement (EIS) on the development of phosphate resources in southeastern Idaho (DES 76-15).

24

1 In the EIS it is shown that of the 16 mining plans, three (Swan Lake Gulch, Paris-Bloomington, and Middle Sulphur Canyon) are located in the Bear River Basin which is in this District's jurisdiction. (Sites located in Snake River Basin are in the Walla Walla District's jurisdiction.) Each mining plan includes a system of drainage channels, check dams, sediment and catchment ponds and other improvements to facilitate control of runoff and sedimentary material. However, the EIS indicates that these control structures "could be inadequate during floods." Accordingly, we suggest that the flooding potential be studied in detail and that appropriate measures be included to minimize this problem.

2 If the proposed plan includes disposal of dredge and fill material in waterways within our area of jurisdiction, a Department of the Army permit under Section 404 of the Federal Water Pollution Control Act of 1972 may be required from this office.

Sincerely yours,

for GEORGE C. WEDDELL
Chief, Engineering Division

1. We agree that the flood potential should be studied in detail. Approval of engineering designs is the responsibility of the District Mining Supervisor, USGS, under 23 CFR 231; such design must be based upon localized conditions. Further constraint to minimize flooding potential exist in the regulatory authority of other Federal and State agencies under existing laws.

2. See statement on page 1-426 of the DEIS.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGION X
ARCADE PLAZA BUILDING
1321 SECOND AVENUE
SEATTLE, WASHINGTON 98101

July 27, 1976 OFFICE OF THE REGIONAL DIRECTOR

Dr. V. E. McKlevey, Director
U. S. Geological Survey Bureau
National Center
Reston, Virginia 22092

Dear Dr. McKlevey:

This letter is to convey our comments upon the draft Environmental Impact Statement prepared by the U. S. Geological Survey Bureau (lead bureau), U. S. Bureau of Land Management, and U. S. Forest Service entitled Development of Phosphate Resources in Southeastern Idaho.

The Geological Survey's EIS is an ambitious document and contains a wealth of useful data. The Geological Survey deserves credit for the level of effort it mounted to compile this EIS. We especially commend the Geological Survey for the environmental sensitivity displayed throughout the document.

25

Our comments should be received in light of these three considerations:

1. The enumeration and interrelation of environmental impacts resulting from the proposed phosphate development is a terribly difficult task;

2. The subject EIS represents a good faith effort by the U. S. Geological Survey Bureau to comply with Section 102(c) of the National Environmental Policy Act; however,

3. We believe we have the responsibility to be as rigorous as we can be in critiquing the EIS because of the profound social, educational, and health impacts this action will have on Southeastern Idaho.

I. General Comments

Although the draft EIS represents an intention to comply with Section 102(c) of NEPA, this is just one section of the Act and is primarily descriptive in nature.

Other Sections of the National Environmental Policy Act require a positive federal response to safeguarding the environment. Our basic concern with this statement, then, is that it does not

evidence a strong commitment by the agencies involved to encourage and take ameliorative actions to lessen adverse impacts such as those enumerated below. One means of ameliorating adverse impacts readily available to these permit-granting agencies is to condition approvals of industrial activities on the provision of services by the companies involved. We recommend that the Geological Survey, in conjunction with the U. S. Bureau of Land Management and U. S. Forest Service, outline in the final EIS a strategy which more positively safeguards the affected environment.

II. Specific Comments

Education - The additional demands for public education personnel and facilities resulting from the population increases due to the development of the phosphate resources will be extremely taxing on the communities of Southeastern Idaho. It is estimated that at present class sizes, $35 million in new facilities and 195 additional teachers would be needed by the year 2000 to accomodate the expected phosphate-related influx of 5,753 new pupils as indicated in the draft EIS. The projected costs associated with these increased demands on personnel and facilities would severely exceed the debt-incurring capacities of the affected school districts. The situation is even more overwhelming when one considers that operational costs have not been considered in the projections (the final statement should address this deficiency).

1

26

The EIS recognizes that the probable fiscal lag in the receipt of increased revenues (i.e., property taxes) from the proposed phosphate development would seriously limit the expansion of educational service. However, it is argued in that the following mitigating factors could be utilized: 1) state funding programs to local school districts in the area, 2) bonding assessments by the local school districts, and 3) increased class sizes. These alternatives, from our viewpoint, are somewhat less than promising. One must note that state funding programs to local school districts are severely limited in Idaho due to legislative resistance. Also, the assumption that communities in the area would support bond assessments because of their necessity does not reflect an understanding of political reality in Idaho. (In 1975, a majority of the bond issues before local school district voters in Idaho were defeated). Further, the idea of increasing class sizes to accomodate the larger student population disregards studies showing correlations between educational achievement and low student/teacher ratios. With local governmental revenues unable to match the demand for educational services, short-term financing solutions should be considered more explicitly in the final EIS.

2

1. The final Environmental Impact Statement includes a fiscal impact analysis on the 17 school districts in the seven counties in Southeastern Idaho. Both operating and capital facilities needs have been included in the analysis. The data are provided through a joint effort of Southeast Idaho Council of Governments and Government Research Institute located at Idaho State University.

2. The short-term financing solutions to assist education of any of the other public services which are going to be impacted by the phosphate development fall into three categories:

1) State legislative action such as a phosphate extraction tax, or

2) Private phosphate mining and processing companies action, such as advance property tax payments or establishing an "Industrial Association" to provide cash grants and loan guarantees for community services (i.e. as done in Sweetwater County, Wyoming).

3) Federal action, such as increasing the percentage of phosphate royalty that is returned to the state for 37.5% to 50% to 75% and mandating that those funds be given to the counties and cities and school districts in the impacted area.

Dr. V. E. McKlevey

3. Concurrently, intergovernmental arrangements for the channeling of financial assistance to the impacted local school districts should be assessed more intensively.

4. A subsidiary issue to the proposed action's impact on the educational system is its effect on the labor force. Some form of early planning under the Comprehensive Employment and Training Act (CETA), as well as, state and local vocational education authorities is necessary if the presently, largely unskilled labor force is going to be able to obtain employment in phosphate mining related jobs. If such planning does not occur, more jobs would be created within the area and yet unemployment would not necessarily decline. The development of manpower planning programs with appropriate state/local manpower bodies by the federal agencies and private companies involved is imperative.

5. Health - Health manpower and facilities are presently inadequate in Southeast Idaho. As noted in the draft EIS, "Southeast Idaho lags behind the national average in medical personnel." Most of the professional services and advanced medical units are concentrated in the Pocatello and Idaho Falls areas. Outside these two cities, the supply and quality of health services in rural Southeast Idaho is acutely inadequate. The EIS states that the projected additional health needs will be 61 additional physicians, 14 dentists, 156 registered nurses, 427 general hospital beds, and 736 nursing home beds. According to our Public Health Service (PHS), these cursory projections do not adequately consider the nature of possible health care delivery problems such as an increase in emergency medical service requirements due to heightened industrial activities in the area. Similarly, it is never stated what type of health professions recruitment policies must be adopted to effectively respond to the additional local health requirements.

6. One of the more serious deficiencies within the EIS is its complete lack of consideration of whether or not the proposed action will exacerbate health hazards to the public through admitted degradations in air and water quality. As PHS noted in its analysis, "the projected demands for water rights to enable slurry transfer with orobable resultant pollution would appear to raise serious questions as regards future supplies of potable and irrigation water resources within the area." More precise data ought to be provided in the final EIS on the possible health hazards resulting from air and water quality degradation.

3. See response to comment No. 1.

4. The development of manpower planning programs is a function of existing laws other than NEPA. We believe that if such plans are needed, they are best developed by the organizations responsible for such activities, especially at the on-scene level.

5. Due to the constraint of space some of the more detailed health analysis available to the Task Force via a contract with the Southeast Idaho Council of Governments, which has been the 314 (b) Comprehensive Health Planning Agency doing Social Services 1122 Health Facilities Review for all seven Southeastern Idaho Counties, has been excluded. However, that 260 page publication of which we used 80 or so pages is available for community use. As to emergency medical services required by the phosphate industry, the safety record of the industry is excellent (see page 1-262 of the DEIS) and any increase would likely be minimal.

6. The matter of water rights and future supplies of potable water is primarily a question yet to be resolved by non-Federal permitting authorities who will ultimately decide the matter if indeed such a proposal is formalized. The matter of "probable resultant pollution" by slurry transport systems is at best a premature and subjective conclusion. The SOI must assume that appropriate regulatory agencies will enforce and prescribe effluent standards that have been designed to avoid a potential health hazard. The EIS takes note of existing in and water quality conditions, most of which are largely beyond the control of SOI.

Dr. V. E. McKlevey

7. The sections on health in the EIS are extremely superficial and merely state what is already known: more people create a greater demand for services. The document is not an analysis vis-a-vis health. It is a general observation of conditions and predictions. Thus, we recommend that the final EIS be more explicit in considering the nature of health and health care problems associated with the proposed action, and consider ways of increasing health facilities/services and lessening the probable health hazards arising from an increase in population.

8. Housing - The EIS clearly indicates that the proposed action will complicate an already inadequate housing supply. The percentage of overcrowded households is extremely high throughout the study region. The private sector is already having trouble alleviating housing pressures, and it is difficult to envision from the EIS how these pressures are going to be eased in the future with an additional 3,657 units needed by 1980. Such a market situation will markedly increase the cost of housing, both rental and purchase, thereby, creating an economic burden for those individuals and families with low- or fixed-incomes. It is surprising that the Department of Housing and Urban Development was not asked to comment on the draft EIS, especially when no substantial ameliorative efforts have been considered in the report. We recommend such consultation; the results of that consultation should be incorporated into the final EIS.

9. Energy - The EIS briefly assesses the general energy impact of the proposed action and estimates that electrical energy needs will be 1.8 times greater than present consumption levels. Although Utah Power and Light Company indicates it will be able to meet this demand, the approximate six-year delay in developing and supplying additional energy to new, major applicants suggests that the effect upon educational and other service providers should be described and evaluated in order that alternatives may be considered.

10. In addition to the demands created by the mining activities, the projected year 2000 population increase of 22,300 people will further stress the energy capacities of the utility system. The implications of this added demand must be analyzed in relation to possible rate increases which may burden those people on low- or fixed-incomes.

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7. See response to comment No. 5.

8. One of the purposes of the public comment period on the draft statement is to alert the public, and State, local and other Federal agencies of matters within their sphere of responsibility and authority. The Department of Housing and Urban Development Region X did in fact review and comment on the draft and those comments are included in this final statement.

9. Substantial revision of projected growth in phosphate mining and processing have been made in the final EIS. The demand for additional electricity will be drastically reduced from that presented in the DEIS. The final EIS discusses this revised rate of expansion in phosphate mining and processing. The effect upon educational and other service providers were described in the DEIS (pages 1-391 - 1-409). The revised effects on public service providers are also discussed in the final.

10. Electrical rate increases to all or select segments of the population are inevitable as long as the nation experiences continued inflationary economic conditions with or without the construction of additional generating capability by the utilities. People on low or fixed incomes suffer the greatest during periods of inflation because of reduced buying power. Less of all commodities and services--including electrical services--can be purchased. The Public Utilities Commissions recognize this situation and modification in rate structures are being considered that would more equitably distribute costs between the various users.

Mr. V. E. McKlevey

Aesthetic Values - The draft EIS's conclusion that, "The study area as a whole will have only minimal to moderate aesthetic impacts," is difficult to reconcile with the statements made previous to it. For example,

> Proposed expansion of processing activities, along with associated urban growth will have aesthetic impact through the introduction of discordant elements such as dust, smoke, noise, and odors usually associated with such development.
>
> Disturbing surface and subsurface water flows with excavations, material wasting, transportation systems, will reduce the water's aesthetic quality to a potentially major degree.
>
> The proposed mineral development and its supportive facilities will eliminate much vegetation and reduce the wildlife habitat, which is a portion of the visually pleasing characteristic of the landscape.

11

Given these comments, the conclusion seems to be predicated on the fact that only two of the six visually distinctive areas in the study region, which also happen to be the least viewed, are directly impacted. This reasoning, however, runs counter to one of the National Environmental Policy Act's purposes: ". . . that goal is to encourage productive and enjoyable harmony between man and his environment." It is our hope that some form of explanation will be profered in the final EIS reconciling these seemingly contradictory positions. Further, in arguing for close scrutiny of the proposed action so as to minimize aesthetic deterioration, the document fails to establish how such oversight should be carried out. We recommend that the way such oversight would be carried out be cited in the final EIS so as to guarantee the existence of some form of governmental scrutiny.

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III. Summation

HEW appreciates the opportunity to comment upon the U. S. Geological Survey's draft EIS for the Development of Phosphate Resources in Southeastern Idaho. Our comments are not intended to be taken as critical of the Geological Survey's commitment to the National Environmental Policy Act, as we know the task of safeguarding the environment in this case is both extensive and complex.

11. The conclusion is predicated on the fact that only two of the six visually distinctive areas in the study region, which happen to be (presently) the least viewed, are directly impacted.

Impacts within the viewing area of the proposed phosphate developments and their related facility and influence impacts will be high to very high. This impact is diluted when it is evaluated with existing habitation areas of man and the vastness of the total study region.

Variations to the mining plans that may increase the visual impacts will be handled on case-by-case basis. Each mining plan will receive intensive scrutiny prior to any final approval.

Mr. V. E. McKlevey

Our major goals in offering these comments are two-fold. First, we are hopeful the Geological Survey will increase its own commitment to ameliorate the adverse effects identified. Second, we hope the Geological Survey will upgrade its final EIS so that it will be a more useful planning document for all parties involved in protecting the quality of life in Southeastern Idaho.

Sincerely,

David P. Miller

David P. Miller
Regional Environmental Officer

cc: Ms. Cathy Penn, CEQ (2 copies)
Ms. Kathryn Moore, OEA

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
REGIONAL OFFICE
ARCADE PLAZA BUILDING, 1321 SECOND AVENUE
SEATTLE, WASHINGTON 98101

June 4, 1976

REGION X

IN REPLY REFER

Office of Community
Planning & Development

10D M/S 317

Thomas Kleppe, Director
Office of Environmental Project Review
Department of Interior
Interior Building
Washington, D. C. 20240

Dear Mr. Kleppe:

Subject: Draft Environmental Impact Statement, Development of Phosphate Resources in Southeastern Idaho

We have reviewed the impact statement which proposes approval of increases in mining and processing of phosphate ore and new applications for leases and prospecting permits.

31

1 We were especially interested in your section on housing and housing forecasts. We concur with you that housing is a major problem in the area and an increase in mining activities will contribute to the problem. We agree in general with your housing forecast which you indicate is based upon Federal Housing Administration Methodolog Some components which appear to be missing in the forecast are the net losses to the housing stock resulting from obsolescence, vacancy requirement and consideration of housing under construction. Normal net loss in housing stock increases with an increase in housing activities.

Although pointing out the problem does not necessarily lead to a solution, we believe your statement will allow for local governmen to better prepare for the impacts associated with growth.

We thank you for the opportunity to review your draft and will appreciate being kept abreast of the resources development in Southeastern Idaho.

Sincerely,

Robert C. Scalia
Assistant Regional Administrator

1. The above methodology was used, but not considering the effects of (1) net losses to the housing stock resulting from obsolescence; (2) vacancy requirements and (3) consideration of housing under construction, in an attempt to keep the very bleak housing situation as conservatively estimated as possible. A possible overstatement in the form of estimates would lead to the data being entirely ignored.

U.S. DEPARTMENT OF LABOR

OFFICE OF THE REGIONAL DIRECTOR

REGION X

ROOM 8003, FEDERAL OFFICE BUILDING
909 FIRST AVENUE
SEATTLE, WASHINGTON 98174
206-442-1548

DATE: [illegible]
REPLY TO:
ATTN OF:

SUBJECT: Draft Enviromental Impact Statement, Southeast Idaho

TO: Director
U.S. Geological Survey

Draft Enviromental Impact Statement on the development of Phosphate research in Southeast Idaho as prepared jointly by the geographical survey, BLM, and the U.S. Department of Agriculture. The study purports to estimate the impact from the development of six billion tons of Phosphate Ore in the three county area in Southeast Idaho.

Although the study is extremely thorough with respect to the geographic and natural enviroment its analysis of socioeconomic development is negligible. For example, the population increase projected by the year 1980 is 30,000 people. The study forecast creation of 8,140 new jobs and the need for 7,468 new units of housing.

Obviously, the crafts, trades, and professional skills that will be required in this area are both numerous and varied, and yet the study only identifies the need for the following skills in the three county area: 61 MD's; 14 Dentist's; 156 Registered Nurses; and 35 Law Enforcement Personnel.

32

1. The study in its present preparation does not serve the major industries, local governments, labor unions or the state employment service, since it does not present a manpower, training, and recruitment plan. It is woefully lacking in its concern for insuring equal opportunity employment and its only mention of minorities in its hundreds of pages is on I-281 where the following statement is made: "The largest minority group in the region consist of native americans. The second largest ethnic groups is of Spanish surnames."

2. If we are concerned about planned and orderly growth and the prohibition of the "boom & bust" cycle we should identify the developers manpower and training needs and also the communities needs with respect to the types of businesses and services required to serve this expansion together with a capital forecast to finance these vital auxiliary services. There should be some mechanism to coordinate the manpower needs generated by this vast project to high unemployment areas, with large pockets of available skilled labor.

1. The requirements for equal opportunities for minorities in the recruitment and training of manpower is a function of existing laws other than NEPA. Such laws apply across-the-board to all employment opportunities.

2. The mechanism available to coordinate the manpower needs generated by the proposed actions is the Area V (seven county) Employment and Training Board. This advisory group makes planning recommendations for the use of CETA I funds. The area V AETB is tied into local government since it is appointed by Southeast Idaho Council of Governments and is tied into State government since its present planning activities feed into Governor Andrus' State Employment and Training Advisory Council, which is staffed by the State Department of Employment. This local-to state coooperative effort could be the mechanism since it can feed information to the Federal Department of Labor. Supplying the mechanism with sufficiently precise information can only be done with the total cooperation of the personnel departments of the respective private companies.

We sincerely recommend that the final study place as much emphasis on the beneficial and adverse affects of this development of human beings, the labor force and business community as is directed toward the flora, fauna and wild life.

Edward A. Hughes
Federal Regional Council Liaison

cc: Scott McDonald, Executive Director
Southeastern Idaho Council of Governments

Lorin Nielsen
Department of Interior

Enclosures

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION X
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

REPLY TO ATTN OF: 10FA - M/S 623

JUL 23 1976

Dr. Vincent McKelvey, Director
U. S. Geological Survey
National Center, M/S 108
Reston, Virginia 22092

Dear Dr. McKelvey:

The Environmental Protection Agency has completed its review of the draft environmental impact statement (DEIS) on the development of phosphate resources in southeastern Idaho pursuant to its authorities under the National Environmental Policy Act and Section 309 of the Clean Air Act. Included with this summary letter of our review is a compilation of general comments, a detailed listing of specific concerns and corrections, and a paper listing applicable environmental laws and regulations.

34

We appreciate that the DEIS is being made available well in advance of the expansion of the western phosphate field. We are concerned here with an incremental process whose resolution will cover several decades. Our recommendation is that separate environmental supplements to the comprehensive program statement be prepared for each mine and processing plant as sufficient information becomes available for the site specific impacts. In this manner, this regional EIS can focus on the cumulative impacts, as presently known, without the risk of skirting the very important project specific impacts. An adequate regional DEIS would enable the planning, prospecting, and leasing portions of the development to be carried forward so adverse environmental and socioeconomic effects may be minimized.

Section 1 of the DEIS focuses on the environmental impacts of the overall development program, but does not provide an adequate evaluation of overall impacts. For example, there should be discussion of the environmental impacts of processing plants operated by leaseholders outside of the State of Idaho such as

the existing Stauffer plants in Silver Bow, Montana and Leefe, Wyoming and the proposed Alumet plant in southwestern Utah. It has been EPA's understanding from discussions before the Council on Environmental Quality convened after EPA's 309 referral of the proposed Osceola Phosphate Development in Florida that the regional EIS for the Western Phosphate Field would be an areawide assessment of impacts.

The discussion of the potential radiological impact of the proposed development program should be reviewed in the light of recent EPA field studies. Radiological information of the specificity discussed in our general comments section is being developed by the Bureau of Indian Affairs for the unrelated Sherwood Uranium Mine EIS. We are particularly concerned about stabilization of mill tailings and any radiation impacts associated with by-product and waste utilization of gypsum, phosphate slag, and mine tailings. The phosphate statement also should address the increased use and widespread distribution of fertilizers with cadmium and possible other trace metals at concentrations exceeding those in similar products from the presently dominant phosphate sources. Our concern with radiation and with cadmium were raised in a letter dated August 20, 1975 from the EPA Regional Administrator (Region X) to your Task Force Leader.

35

In the absence of definitive knowledge of the long-term impacts of mining and processing, it would seem necessary to examine the following factors in greater depth:

1. Environmental effects of various processing technologies.

2. Phosphate development not only elsewhere in the U.S. but also in the world, especially since the shortages that spurred the planned production have been eased and the new production would seem to be in excess of national demand.

3. Alternative sources of phosphate fertilizer.

4. Phased development of the field arising from consideration of 2 and 3 above.

5. Declaring the Western Phosphate Field as a Known Phosphate Leasing Area (KPLA), thereby providing a greater degree of control by eliminating prospecting permits and preference right leases. Ultimately this approach may increase revenues because all new leases would be on a competitive basis.

6. The secondary and other impacts of associated and alternative development on private lands.

1. As noted in Part 1, Chapter 1, all existing and proposed plant operations are on private lands, and accordingly are under the regulatory authority of the State and local governments. The major Federal action herein described primarily involves the mining of phosphate rock on Federal lands as provided under the Mineral Leasing Act of 1920 and as detailed in the 16 mining plans. However, the environmental impacts of the existing processing operations have also been outlined within the scope of present knowledge, in both the regional statement (e. g. pages 1-185 to 1-190 of Chapter II, also in Chapter III, Environmental Impacts, and subsequent related chapters of the DES) and in the Volume II site-specific statements (as applicable to each of the proposed operations, Parts 4-11 of the DES).

With respect to Alternative Processing Technologies (described on pages 1-533 to 1-527 of the DES, their development is in the very early research or formative states and, correspondingly, their impacts on the environment are largely indeterminable.

2. A lower, "more probable" level of production has been added to the text.

Alternative sources of phosphate are discussed in Part 1, Chapter VIII.

3. Discussion of development based upon a lower, "more probable" supply and demand has been added to the text. Controlled, phased development of the phosphate industry in southeastern Idaho is not within the authority of the Secretary of the Interior.

4. A Known Phosphate Leasing Area (KPLA) designation is based upon prior work; such as exploratory drilling, outcrop trenching, geologic and geophysical work and in association with nearby physical mining, which has yield sufficient information that a knowledgable determination and/or reasonable engineering judgement can be made that a deposit can be expected to underlie the included lands, to the degree that the leasing provisions of the Mineral Leasing Act of 192D apply.

It should be remembered that the general boundary of the Western Phosphate Field encompasses an extensive area based upon geologic data and known occurrences of the mineral sought. Neither the Federal government or any other governmental body or member of the public or private sector dealing with mineral deposits can guarantee the existence of ore under each and every acre of land within the bounds of the delineated field. For example, no responsible person can or would say that every acre of land in Idaho, Montana, Utah, and Wyoming which lies within the Western Phosphate Field, is in fact underlain by an economic phosphate deposit. This fact can only be borne out when the lands have been either extensively explored or completely mined out.

5. In the event that the necessary permits, leases, etc., are not granted by the Secretary for continued phosphate production at current levels, or an expanded level from Federal holdings, the various companies that have options on private of state phosphate resources may

elect to develop those holdings instead. Should this occur, the environmental impacts on private and/or state land will then create secondary and other impacts on Federal land.

Since the extent and location of these holdings (other than Federal) has not been documented at this time, accurate and factual assessments are impossible. Certain assumptions, however, can be made. It is a known fact that the phosphate deposits occur in much the same pattern and essentially the same plane and topography as those of the Federal holdings. These deposits under State and private ownership are merely extensions from those in Federal ownership. Therefore, if must be assumed that many of the same drainages, the same wildlife communities, livestock operations, etc., will be adversely affected in direct relationship to the size, intensity, and location of mining. It can be further assumed that applications would, of necessity, be filed with either or both surface managing agencies (BLM and Forest Service) for rights-of-way and special use permits for construction of such facilities as power lines, roads, railroads, water diversion structures, waste dumps, etc. In effect, therefore, development of private and State holdings cannot be entirely separated from some use being made on Federal lands. Some of these secondary impacts can be controlled but not alleviated through stipulations imposed by the granting agency. Direct controls on private and state lands then in most cases comes under State controls which generally are less restrictive than Federal controls. Impacts that are definable cannot be written at this time since no plans or commitments are available for review. It can be generally assumed that these impacts will be more severe and longer lasting than those on Federal holdings.

Development on State and private holdings may of necessity leave part of the resource in place because of the inability to extend operations onto adjoining Federal holdings. This type of situation could have higher economic impacts on the operating company and contribute to greater inefficiency and even the loss of some of the resource because of the imposed restrictions of ownership boundaries.

If permits are not issued to mine the Federal resource, this too may have some effect on the location of plants and other facilities that have been proposed by the companies. This action could have some impacts on the Federal land and other resources, but the extent is undeterminable.

The mitigative measures discussion in Section 1 should be expanded to include alternative measures, such as more extensive reclamation, and must indicate those measures that will be implemented to minimize environmental impacts. For example, page 1-422 begins a listing of 13 items that the DEIS identifies as requirements that would further mitigate adverse impacts; page 1-426 lists measures which should be taken to mitigate impacts to the water resource. The only measure specifically identified for action is the sealing and protecting of ponds that contain toxic elements. 6

Our general comments section, and to a lesser extent our specific comments section, document the kind of detail essential to adequately assess the environmental impacts.

Due to the incompleteness of the DEIS as a program statement and the need for a firm commitment to provide additional environmental supplements to the comprehensive program statement to assess the impacts of individual actions, we are rating the statement as category 3-inadequate. As we have indicated, reworking Section 1 of the DEIS to increase the scope, to provide further information on radiation and toxic materials and to provide a strong commitment to mitigative measures could result in a program statement that would be more useful to the Secretary of the Interior in making decisions on expansion of the Western Phosphate Field as well as to those evaluating the individual actions resulting from such expansion. 37

According to the statement made on page 1-499 of the DEIS, the Secretary may, for proper cause, defer final action on a proposed mining and reclamation plan to answer the concerns raised by these comments. EPA believes that the U.S. Geological Survey should provide additional data and specify mitigative measures to reduce environmental impacts before inviting a decision by the Secretary on allowing any portion of the development to proceed.

Sincerely,

Donald P. Dubois
Regional Administrator

6. Those mitigating measures listed on pages 1-422 and 1-423 of the DES apply to water resources as well as other aspects of the environment. We believe that compliance with existing Federal and State laws, especially those concerned with water quality, will be the strongest overall mitigation possible. Specific mitigating measures for each minesite, such as relocation of dumps to avoid covering perennial streams, etc., are further listed in Chapter IV, Parts 4 through 11.

EPA Review of the DEIS on the Development of Phosphate Resources in Southeastern Idaho.

GENERAL COMMENTS

I. AIR ANALYSIS

7. 1. Throughout the discussion of air resources on page 1-364, references to "Class I" and "Class II" ambient standards are misleading. Under the "Prevention of Significant Air Quality Deterioration (PSD)" sources are reviewed to determine whether the applicable air quality increment will be violated. The PSD increments are increases in air quality concentrations allowed after January 1, 1975. All increased Total Suspended Particulate (TSP) and Sulfur Dioxode (SO2) emissions occurring after that date contribute to the use of the increment (see Environmental Law and Regulation Paper).

Tables 1-41 and 42 on pages 1-369 and 370 are misleading in that PSD increment violations are presented together with National Ambient Air Quality Standards (NAAQS) violations. PSD Class I and II increments denote allowable changes in air quality over existing levels while NAAQS are absolute levels of air quality. It would be more accurate to separate NAAQS and PSD data.

38

8. 2. In Chapter III (page 1-364) it is indicated that the primary impact on air quality from phosphate resources development would be from the growth of existing plants. Expansion of sources subject to the PSD regulation would be subject to review and approval before construction. Under the present PSD regulations, sulfuric acid plants and phosphate rock processing plants are subject to review.

9. 3. The discussion of air resources impact (page 1-364) is inadequate. This section should compare projected future emissions to existing emissions in quantitative and specific terms. The basis for Tables 1-37 to 1-42 should be discussed in the text in some detail. More discussion of the modeling is needed, including a brief discussion of methodology, background assumptions made, input parameters, whether the model was calibrated and validated and recepter locations.

10. 4. Page 1-430 - On June 9, 1976 EPA promulgated a regulation for the J.R. Simplot Company facility (see Federal Register, page 23200). The regulation is designed to assure attainment of NAAQS but will not leave a margin for growth unless further controls are applied to reduce total emissions.

11. 5. Throughout the discussion on pages 1-433-434 several statements are made in regard to using dispersion of pollutants and/or intermittent control strategies to attain ambient air quality standards.

7. The text and tables have been modified to reflect these items.

8. The text has been amended to include reference to the PSD regulations. PSD regulations, however, would not apply in an area where a previous violation had not occurred. Thus the areas around most existing plants would be exempt.

9. The submission to the IATF by North American Weather Consultants (Reference 19), a copy of which was provided to EPA Region X, contained all of the requested information. However, in the editing process the decision was made not to include this detail. For reference purposes, the specific items alluded to may be found in Reference 19 as follows:

a)	Comparison of future and existing emissions	Section 4.3 (pp4-74-8)
b)	Basis of Tables 1-37 to 1-42	Sections 5, 5.1, and 5. (pp 5-1 to 5-9)
c)	Discussion of modeling	Sections 4, 4.1, and 4. (pp 4-1 to 4-7)
		Appendices A, B, C, & D.

10. Change first paragraph, beginning 8th line, pg. 1-430 to read as follows:

Limiting SO_2 emissions to 27,000 pounds per day. The J. R. Simplot Company's acid plants is regulated by a new regulation, promulgated in June 9, 1976, which replaces Regulation R (Federal Register, Vol. 41, no. 112 CFR52.675). This regulation is designed to assure attainment of NAAQS, but will not leave a margin for growth unless further controls are applied to reduce total emissions. Any new or modified sulfuric acid plant would be subject to the Federal and State standards of performance for new sulfuric acid plants.

The text has been changed to include this new regulation which went into effect after the DES was completed.

11. The interpretation of the Clean Air Act with regard to stack height increases and supplementary control systems (SCS) was published subsequent to the air quality submission to the draft EIS. However, it is noted that the last paragraph of page 1-434 does contain the policy statement which is indicated in the above comment. Accordingly, the text on pages 1-433 and 1-434 has been changed to reflect the new Stack Height Increase Guideline (See attached).

In addition, a statement has been added to the last paragraph on page 1-434 of the DES as follows, "On February 18, 1976, EPA published in the Federal Register (Vol 41, Number 33, pages 7450-7452) the agency's "Legal Interpretation and Guidelines to Implementation of Recent Court (P. 31-11) Decisions on the Subject of Stack Height Decrease as a means of meeting Federal Ambient Air Quality Standards." As stated in the introduction, "...Congress did not intend increased stack height and Supplementary Control Systems to be used as a means of attaining National Ambient Air Quality Standards where constant emissions reduction controls were available."

On February 18, 1976, EPA published in the Federal Register (Vol 41, Number 33, pages 7450-7452) the agency's "Legal Interpretation and Guidelines to Implementation of Recent Court Decisions on the Subject of Stack Height Increase as a means of meeting Federal Ambient Air Quality Standards." As stated in the introduction, "...Congress did not intend increased stack height and Supplementary Control Systems to be used as a means of attaining national ambient air quality standards where constant emissions reduction controls were available."

The control strategy for air pollution sources located in the "development area" must therefore rely on constant control measures and/or alternative processes to those sources determined to be causing and/or contributing to the non-attainment of National Ambient Air Quality Standards. The EIS should be revised consistent with the agency's tall stack and Supplementary Control System guidelines.

6. The Alumet mine and beneficiating plant and the Earth Sciences mine and beneficiating plant were given a cursory evaluation in regard to their affect on the air quality. Emission estimates supplied by Alumet for the beneficiating plant failed to include details about stack parameters. Mining emission estimates may not be representative
12 of what can be expected depending on what emission reduction techniques are utilized. Definitive methods for controlling emissions from processing plants is completely lacking and only possible control techniques are discussed for the mining operations.

7. Comments on North American Weather Consultants Report:

a. The analysis by North American Weather Consultants could best be categorized as a cursory screening assessment of the air quality
13 impact of the proposed development. A more detailed analysis would need to be made on a case-by-case basis once the individual mining and processing plans are finalized. This is recognized on page 2-1 of the analysis.

b. The trajectory model used for estimating annual means has not been published in the open literature - thus, it is not generally
14 well known or accepted by the scientific community. Additionally, the trajections assumed for calculations are based completely on the subjective judgment of the analyst; there is no hard data to support them.

c. Because of the generally high levels of Total Suspended Par-
15 ticulate in the area, fugitive dust impacts from the mining and transportation facilities should have been examined in greater detail.

12. Many of these details have not been designed and are not available at this time. They will be necessary and be required at such time as permits are sought.

13. The Task Force concurs. Until such time as exact locations and engineering designs are available, only an overall assessment is possible. More detailed analyses on a case-by-case basis will be required for permits and approvals from regulatory agencies.

14. It is correct that NAWC's Plume Trajectory Model has not been published in the open literature. However, the complete model description is contained in the report on file with the Interagency Task Force (copy provided to EPA Region X by NAWC). With the proliferation of transport and dispersion models, relatively few have been published in the open literature. The EPA Valley Model (CRM3D) is an example.

The plume trajectories, which were input under stable conditions, were chosen to insure the plume followed the terrain confluences and did not flow through barriers such as mountain ranges. Since stable flow would frequently be associated with an evening drainage flow regime, the trajectories were normally directed toward lower terrain.

The only "judgment" required by the analyst is the ability to read a topographic chart and selected trajectories which will follow terrain confluences.

15. As was set forth on page 5-9 of NAWC Report 775-A (Section 5.3 Mines, 1975), No data on pollutant emissions directly from existing mines in the phosphate area were found. EPA Report No. EPA-450/3-74-013, prepared by GCA Corporation in 1973, and entitled "National Emissions Inventory of Sources and Emissions of Phosphorus," provided the value of 0.5 lb/ton for uncontrolled particulate emissions from hard rock phosphate mining.

II. WATER ANALYSIS

1. Hydrologic surveys on each mine and beneficiating plant site must be completed. Data to be gathered would include rainfall, evapotranspiration, and runoff characteristics. The rainfall records should indicate average and maximum yearly precipitation as well as what percentage of this precipitation is in the form of snowfall. Also of great importance are the historical records for the 10 and 25 year, 24 hour rainfall events.

16.

2. The EIS must contain specific plans detailing methods of collecting and treating all runoff and mine dewatering from each mining operation. Detailed maps must be included. These maps should indicate precise location of all piping and collection systems in the mining area; all places where runoff (either from dump areas or above affected areas) is captured and routed around, over, or under mining areas; locations of French drains, treatment systems, discharge points to streams or groundwater, groundwater pump out locations, pit dewatering, etc. The capacity of all treatment devices should be detailed. This description must include the daily average and daily maximum flows from these treatment devices. The flows of all piping or diversions which do not go through a treatment system should be charted.

17.

3. The EIS must contain specific plans detailing methods of collecting and treating of all runoff and process effluent from the beneficiating operations. Detailed maps must be included. These maps should indicate precise locations of all buildings, process flows, piping to transport effluent, treatment devices, any discharge points to the receiving water. Any discharge or pumpout of groundwater must be detailed with volumes of flow addressed. The capacity of all treatment devices must be detailed indicating the daily average and daily maximum flows through these devices. Diversions of all contaminated and non-contaminated runoff as affected by the beneficiating plant must be indicated showing destination and flow quantities.

18.

4. The water quality of all discharges from mines and beneficiating plants to surface streams and groundwater should be indicated. Of specific value are the parameters of suspended solids, pH, biochemical oxygen demand, nutrients, radium-226, fluorides, and heavy metals including arsenic, silver, cadmium, copper, chromium, iron, mercury, lead, zinc, molybdenum, selenium, and vanadium. The methods to treat these waste streams must be specified.

19.

5. The data on surface water quality does not adequately reflect the quality of existing streams. Aquatic biota studies should be undertaken in representative locations of all streams that could be affected by mining operations. These studies should determine the quality, types, and diversity of biological organisms present

20.

16. Only limited hydrologic data are available at this time. The data, however, are deemed sufficient for the determination of impacts as described. Additional hydrologic data for all except possibly ongoing operations should be available at the time more detailed engineering designs of mining operations are made.

17. In general, the mine plans do not contain these engineering details. In most cases, these engineering details cannot be designed until after exploratory drilling of the ore body. In each case, these engineering details will be required before final consideration can be given on approval to mine.

18. The proposed beneficiating plants will be located on private lands and will not be under the direct control of the Secretary of the Interior. They will, however, require permits and approvals under various Federal and State laws relating especially to air and water quality, and conform with local zoning requirements, if any. Detailed engineering designs will be required for these approvals. In assessing impacts, the Task Force assumes that the applicable laws and regulations will be adhered to.

19. See letter Control No. P-31, Comment Control No. 20.

20. A monitoring program is presently being prepared by appropriate agencies, and at least most of the parameters referred to are being considered. Discussion of a monitoring program has been added to the manuscript.

in the streams. This study should be coupled with a water quality study in which water samples are collected and analyzed for suspended solids, biochemical oxygen demand, pH, nutrients, radium-226, fluoride and heavy metals including arsenic, silver, cadmium, copper chromium, iron, mercury lead, zinc, molybdenum, selenium, and vanadium. Both diversity and water quality studies should be done at least monthly for an extended period until a good statistical summary of the stream biological community, aquatic diversity, and water quality can be accurately determined. After mining begins, periodic sampling should be done to determine what effect the operation is having on the existing water quality.

6. The enviromental impacts created by the existing mines are not discussed in enough detail to determine what kind of mitigative measures might be most effective. Point discharges from sedimentation basins which are not being controlled, washed-out sedimentation basins caused by poor construction or lack of spillways, and erosion
21 of spoil dumps have all been observed from existing mines. Such items if documented would point toward specific reclamation measures which could be required as mitigative measures for future mines.

7. What contingency plans have been incorporated to guarantee that unforeseen problems such as overburden pile sluffage, culvert, or drain pluggage, collapse of treatment pond structures, or any other
22 event which would conceivably cause an unplanned and potentially damaging discharge to receiving water will not occur, or will be controlled?

8. More specific estimates must be made as to quantities of ground-
23 water diverted due to mining operations. Insufficient geologic studies have been done at this time to make accurate estimates on groundwater flow.

9. The EIS should address the effect on groundwater quality due
24 to various factors such as discharge of mining effluent to ground-water, pumpout of groundwater, and obstruction and diversion of underwater and surface flows by mining operations.

10. EPA jurisdiction over Wastewater Discharges to Surface Streams (see Environmental Law and Regulation Section):

The EIS should state that in order to discharge to a surface water, a NPDES permit is required (pursuant to PL 92-500, Federal Water Pollution Control Act) and that this permit would be based on:

25

-Guidelines published on June 10, 1976 for Mineral Mining and Processing which specify the effluent limitations for water discharge from phosphate mines.

-Federal Registers of February 24, 1974 and January 27, 1975 for Phosphate Manufacturing; Federal Registers of April 8, 1974, January

21. On occasion empoundments have been breached due to the lack of a spillway. For example, during the spirng of 1975 at least two sediment retention basins constructed on the east side of Woodall Mountain failed. Also, in the spring of 1974 a large mudrock flow occurred at the Conda Mine, on the east side of the Woodall Mountain.

At other mines, for example the Maybe Canyon Mine, gullying has occurred on an old waste dump. This dump, built to USFS specifications, did not prove stable due to a) lack of bench drainage, caused by insloping bench faces, berms, and baffles, b) steep slope faces between benches (sloping about 1-½), and c) lack of vegetative success after seeding due in part to a southern aspect and sttep slopes which did not retain adequate soil moisture.

In July, 1972, a mudrock flow occurred at waste dump #4 (a north-east aspect) on the Wooly Valley Mine. The causes for the failure of dump #4 were a) excessive slope steepness (this was an angle of repose dump with intermittent benching), b) inadequate drainage caused by benches, c) the fact that dump #4 accumulated large quantities of drifted snow during the winter aspects, d) intermittent thawing and freezing which directed water from the dump face across the bench onto the next bench face, thus causing gullying, and e) perhaps the single most important factor in the failure of dump #4 was the fact that during the winter of 1971-1972 snow was incorporated in the overburden material, during construction of the dump. During the late spring and early summer of 1972 the incorporated snow melted causing a void and a massive kickout, the dump failed.

22. Potential environmental problems are averted through enforcement and regulatory operations. The Conservation Division is responsible for, and always conducts a) a thorough review and Environmental Analysis of proposed exploration and mine plans, b) going on-site inspection during various phases of operations and construction, c) systematic environmental and engineering inspections and spot checks of lessee's activities, d) investigations of pollution causing incidences, and e) a relatively new requirement for the operating companies to apply for a National Pollution Discharge Elimination System Permit prior to discharging effluent into receiving waters.

23. Except perhaps for the Diamond Creek and Paris-Bloomington mines, it can be stated that, generally, the quantity of ground water that may be intercepted will be small and from localized perched water tables. Test drilling data indicate that little ground water will be encountered in pits on steep hillsides and ridges. Accurate estimates of ground water flow at the proposed mining sites could be gotten only at great expense and after lengthy studies.

24. Disturbance of the land and aquifers by mining operations has little effect on ground-water quality in the study area. Analyses of water from waste dumps, sediment catchment ponds, and test wells in the Phosphoria indicate that the concentration of dissolved constituents in

14, 1975, June 23, 1975, August 20, 1975, and May 19, 1976 for Fertilizer Manufacturing all apply to water discharges from beneficiating
25 plants associated with the processing of the phosphates.

-Idaho Water Quality Standards and Wastewater Treatment Requirements of June 1973.

III. TOXIC ELEMENTS ANALYSIS

1. In general, there is insufficient information in the DEIS to assess what environmental impacts would result from mining, processing and using materials derived from a resource that has some trace elements in concentrations greatly exceeding their crustal abundance. Although the trace element content of the phosphate rock and overburden material is summarized (p. 1-61), the redistribution of toxic elements as a result of the proposed action was not quantitatively examined for any pathway, and specific consideration of some potential pathways was lacking. Criteria for evaluation of concentrations that may be detrimental were omitted in some cases and were perhaps inappropriately applied in others. Criteria were presented only for water (vanadium, zinc, arsenic, selenium, cadmium, and
26 uranium, p. 1-132; and fluoride, p. 1-136); for livestock forage (fluorine, p. 1-168, 1-190, and 1-372); and for beryllium in ambient air (p. 1-429). Toxic element aspects were not specifically discussed in the sections on mitigative measures and alternatives except to state that (1) observation wells should be placed in or near backfill areas and near settling or evaporation ponds (p. 1-427) and (2) all processing ponds with objectionable concentrations must be sealed and protected from floods (p. 1-427). Potential long term impacts were dismissed as "probably small" (p. 1-482) without substantiation. The summary of irreversible and irretrievable commitment of resources speaks only of "resources" of certain elements (p. 1-488) in quantities that do not reflect the totals present in the mined material (p. 1-69) without defining "resource" characteristics. Quantities appear inconsistent (lower) when compared to resources in Paris-Bloomington Mine (p. 1-340). Actual discussion of these resources is lacking.

2. Several special studies, monitoring and reviews of trace elements data were included in the EIS. (See Volume 2 for water quality at mine sites; Volume 1 for surface water quality, p. 123; groundwater and processing plants liquid wastes, p. 132, 138 and 147; groundwater near mining, p. 149; ongoing monitoring study for selected streams, p. 153; airborne particulates in snow near
27 processing plants, p. 172; vegetation and soil study, p. 185 et seq. and 372). Additional information on the existing conditions should be developed particularly for processing operations and product and by-product use. Recommendations for any additional studies that may be necessary to assess potential toxic metal impacts would also be appropriate for inclusion in the final EIS.

these waters differs insignificantly from that in nearby springs and streams.

There would be some increase of turbidity in ground-water if cavernous limestones are breached by mining operations. However, neither the Rex chert nor the Wells limestone are known to be cavernous in the proposed mining area.

25. This information has been added to the text.

26. The text has now undergone considerable revision and in our opinion provides sufficient interpretation, based on data, to evaluate the probable nature and extent of impacts. This assumes that adequate monitoring will take place.

Aspects of redistribution of radioactive elements have now been discussed in the text, (see for example P. 1-133 of the DES) to the extent warranted in this report or to the extent permitted on the basis of available data.

With regard to water quality criteria and proposed guidelines for phosphate rock mining and milling we have now cited pertinent references (see p. 1-121 of the DES).

Detailed monitoring procedures for mitigating potentially toxic elements and other water quality parameters are being developed by appropriate agencies and were not considered to be within the scope of this report.

The text on p. 1-482 of the DES with respect to short- and long-term impacts has been revised.

27. The text now includes some additional discussion of existing conditions with regard to distribution of radionuclides in phosphate rock processing (see p. 1-133 of the DES).

Recommendations for further studies, have been made to agencies responsible for developing a monitoring program.

3. The proposed actions encompass a study area with about one billion short tons of phosphate "reserves" (P_2O_5) under present economic conditions (1-56) and with "resources" of perhaps 85 billion short tons in the Meade Peak region (1-58). Although not specifically pointed out in the EIS, increased development of the western phosphate field and decline of the Florida phosphate production will represent a shift from a resource that is relatively
28 low in cadmium to one that is relatively high. Cadmium is transmitted from rock to fertilizer products and subsequently taken up by crops under certain conditions. Research on this has been reported in Australia (see footnotes 1, 2, 3), where certain phosphate resources with similarly high concentrations of cadmium are utilized, and recently, in the United States. (see footnotes 4, 5). It appears that this pathway should be specifically examined for possible long-term impacts as accumulations of cadmium in agricultural soils might occur over many years.

4. Environmental impacts of by-products and wastes from processing deserve greater attention with regard to toxic metals. Essentially no information beyond liquid waste concentrations was presented on
29 the redistribution of trace elements during processing, although the phosphate rock contains cadmium and selenium at average concentrations exceeding 100 times their crustal abundance and several other toxic elements at concentrations more than 10 times their crustal abundance.

43 IV. RADIOLOGICAL ASPECTS

Generally the draft environmental impact statement should provide a more complete evaluation of the radiological impact of the proposed development of phosphate resources in Southeastern Idaho. EPA is involved in a nationwide study of radiological aspects of the phosphate industry. As a result of our efforts in Florida, several informational papers are now available (see footnotes 6, 7, 8) with additional papers expected in the future. Based on information resulting from our studies, we believe that the final environmental statement should include the following specific information for each proposed mining and processing site:

30 1. estimates of the source term, maximum individual dose (mrem/year), and integrated population dose (man-rems/year) for radon and other radionuclides via the following potential pathways to man: emanation from gypsum piles; contamination of surface and groundwater by gypsum pile runoff, erosion, seepage, deep well injection, and dewatering; and suspension and resuspension by wind erosion;

2. estimates of the future environmental radiological impacts from increased phosphate mining and processing activities;

3. steps that are being taken or may be taken to mitigate the radionuclide release from phosphate mining and processing activities;

28. A study of this research shows that the cadmium contained in fertilizer accumulates in the soil upon which the fertilizer is applied. The uptake of cadmium by plants is affected by many factors, but the amount generally increases as the amount in the soil increases. The absolute amount of cadmium added to soil in long-term fertilizer usage, however, is small.

29. Some discussion of radionuclides and their distribution in some of the phosphate industry products and by-products (gypsum and tailings) has now been included (p. 1-133 of the DES). With regard to water quality the discussion as now revised, although not directed toward finished milling products does deal with wastes which may represent main environmental concerns.

However, with reference to fertilizer products, it is likely that these would contain significant quantities of trace metals which might have deleterious effects so far as utilization by plants is concerned. It's not apparent, however, that fertilizer prepared from Idaho rock would be greatly different with respect to most trace metals than fertilizer prepared from rock of other areas. As pointed out, though, in Letter control P-31 comment P-31, cadmium concentrations in Idaho ore are higher than those in Florida ore.

30. The section titled "Radioactive elements in phosphate rock products" has been rewritten and expanded. Also, a section on mitigating measures has been added, and necessary revisions have been made in other appropriate sections of the text.

However, the design of a radiological monitoring program by the Task Force is not appropriate and extends beyond the scope of the EIS. This responsibility, coupled with the enforcement of related radiation control regulations, is in the domain of responsible Federal and State agencies, mainly EPA and the Idaho Department of Health and Welfare.

4. remedial actions to be taken as a result of pond dike failures (possibly caused by an earthquake), or any incident which could result in an adverse environmental impact;

5. impacts associated with by-product and waste utilization of gypsum, phosphate slag, and mine tailings;

6. impacts on occupational workers with respect to the respiration of dust particles, radon, and radon daughters;

30

7. description of a radiological monitoring program to provide baseline and operational data to assure that no detrimental radiological impacts occur. The program should at least include samplings of radioactivity at nearby aquifers (via test wells), water runoff from mined areas, nearby surface waters, and air at critical locations (especially at working areas and housing areas);

8. impact of phosphate mining reclamation techniques, especially concerning housing construction on slag or mine wastes (see footnote 7).

V. SOCIOECONOMIC ANALYSIS

1. The DEIS and supporting socioeconomic study conducted by the Southeast Idaho Council of Governments (SICOG) did not consider the employment and resulting socioeconomic effects associated with the construction of the 4 beneficiating plants, possibly one processing plant, 60 to 65 miles of railroad, and the utility corridor. It is known that the labor force associated with construction of one beneficiating plant could average as many as 465 people and peak to 700 people for a 12 to 16 month period. While some of this construction work could be subcontracted locally a substantial short term migration into the area would seem likely.

44

31

2. The source of the 2,335 basic jobs related to the mining and processing from which secondary impacts are generated is not clear either in the DEIS (pages 1-391, 1-392) or the supporting document, Report II of the Socio Economic Analysis prepared by SICOG (Table 1.1-1 and Appendix I). The source of this data needs to be referenced.

32

31. Recent developments now indicate that only two beneficiating plants will likely be constructed, at Diamond Creek and at Paris-Bloomington. Accordingly, the construction impacts have been analyzed and included in the text.

32. The data were compiled by the Task Force from interviews and discussions with the eight companies.

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SPECIFIC COMMENTS

Page		Comment
1-4	33	Footnote 2 should include "1975" production figures to be consistent with the rest of the footnotes and to provide additional background for the reader.
1-17	34	Would the companies holding leases have rights to uranium and other by-products, in the phosphate ore without additional royalties?
1-58,59	35	Gulbrandsen's estimate of 85,000 million short tons of 24% P_2O_5 resources greatly exceeds Garrand's estimate of 1,000 million short tons of reserves for the study area. What are the principal differences in the two estimates? If deep mining will ultimately be necessary to recover the vast resources estimated by Gulbrandsen, can terms of current leases ensure that proposed operations will facilitate rather than hinder environmentally acceptable future development?
	36	Would lease requirements for stockpiling marginal grade ores and placement of waste dumps be examples of such terms?
1-61	37	Explain what (--) means. In some instances, no average is given even when a number of samples have been collected and a maximum value is shown. See "Boron", carbonate rock column for example.
1-61	38	Cite the reference used as the source of values given for continental crustal abundance.
1-61	39	Maximum concentrations of selenium and cadmium exceed 1000 times the continental crust values in both phosphate rock and mudstone. Average values exceed 100 times the crustal abundance for these two elements in all three rock types (phosphate, rocks carbonate, and mudstone). Revegetation of mine dumps composed of overburden materials may thus reflect the higher metal content of such materials if these are in available forms. Similarly, terrestrial animal species in the area might exhibit increased concentrations compared to the same species outside the mining areas. What information exists on the present background and projected levels in the phosphate development area as compared to other areas?

33. These data were not available for the DES; they have been added to the text.

34. Under the lease terms, the companies have rights to mineral associated with the phosphate. Additional royalties would be set if these associated minerals were directly recovered.

35. The 1 billion short tons of reserves are considered mineable under present-day economic and technologic conditions. The 85 billion short tons of resources includes the present-day reserves, but the additional amount (84 billion) is not considered mineable under present-day conditions. Most of this resource is deeply buried.

36. Waste dumps are normally located to facilitate further recovery of phosphate rock. At such time as it is economically viable. The stockpiling of marginal grade ores, although not required at this time, could be required as a lease stipulation.

37. The (--) means that no value is known; or, in the case of an average where a maximum is given, that the number of samples analyzed is too few to yield a meaningful average value; or, thirdly, that the limit of detection is such that only the higher values are determined.

38. The source of these data is Taylor, J. R., 1964, the abundance of chemical elements in the continental crust--a new table: Geochem Cosmochem. Acta, v. 28, p. 1273-1285.

39. The Task Force is not aware of any data on concentrations of selenium and cadmium in terrestrial animal species nor does it know of any significant ongoing studies in southeastern Idaho.

Page		Comment
1-62	40	The phosphate content of the Bloomington Canyon vanadiferous zone is not reported. Would this be used for fertilizer production and if so, what would be the projected trace element content of the product?
1-62	41	The EIS presents conflicting information on by-product recoveries planned by Earth Sciences. Vanadium, selenium, silver, and possibly zinc recovery are indicated on 1-62. However, pp. 61, 12, 19, 30, and 22 are inconsistent in discussing what will be and what possibly may be recovered from the ore. Processing technologies and waste residuals from the byproduct recovery operations should be examined for environmental impacts.
1-92, 93, 94	42	Additional information should be included on (1) the actual concentrations in soil of the trace elements which increase towards the processing plants. (2) the trace elements which were analyzed that did not show increases. (3) the levels of trace elements considered detrimental for specific purposes. (4) the potential sources and consequences of the unusually high fluorine, lead, manganese, mercury, rubidium, and zinc within 0.5 to 1 mile of the processing plants.
1-122, 123	43	Arsenic, cadmium, vanadium, and selenium were not found (less than 1 microgram per liter) and chromium, copper, and zinc were low (less than 10 micrograms per liter) based on one analysis of stream samples collected during low flow in 1974. Although the text states that these data should be considered as maximum concentrations, this should be clearly stated as maximum only for that sample (dissolved plus suspended) as the data base is quite small for any generalization.
1-124	44	Dissolved arsenic, cadmium, lead, molybdenum, and selenium concentrations were at or below one microgram per liter in samples of Angus Creek and the Blackfoot River above Angus Creek and near Henry. Mercury exceeded the recommended level for freshwater aquatic habitat (maximum 0.2 and average 0.05 micrograms per liter, National Academy of Sciences, National Academy of Engineering, 1972 Report on Water Quality Criteria, EPA-R3-73-033 March 1973). What criteria were the basis for the statement that none of the elements are present at harmful levels?
1-124	45	Solubilities in natural waters may be difficult to predict if formation of organo-metallic complexes or biologically induced changes occur. Recent studies demonstrate the formation of volatile selenium compounds by micro-organisms in lake sediment through biological methylation. (Science, vol. 192, pp.1130-1131). This exemplifies the necessity of considering not only physical solubilities and absorption phenomena but also biological phenomena in movement of toxic elements through the geochemical cycle.

40. Earth Sciences, Inc., hopes to recover the phosphorus of the vanadiferous zone, but does not now know if it can. Processing of the rock is presumbly undecided and in the experimental stage.

41. The initial part of this comment applies to both page 1-62 and page 1-63 of the DES, presenting a factual description of planned or possible byproduct recovery. The other pages noted, but not clearly identified, apparently are in Volume II, Part 6, Pages 6-61, 6-12, 6-19, 6-30, and 6-22 of the DES.

Statements made on the pages noted in Volume II appear to be accurate and consistent with the initial description on pages 1-62 and 1-63 of the DES with one principal exception involving the omission of the word "zinc" in line 8 of page 6-30. This has been corrected by revision of text.

While discussions on pages 6-12 and 6-19 are relevant to the subject of the comment, the ones on page 6-22 and 6-61 are on unrelated subjects and are not applicable to the question.

The processing technologies for byproduct recovery are still in experimental or pilot stages. Consequently, their impacts are largely indeterminable at this time.

42. Data on items (1) and (2) have been added to the text. We do not know what levels are detrimental for specific purposes. Further, we do not know at this time the sources or the consequences of the unusually high levels of some of the elements. Studies with objectives aimed at evaluating these questions would be necessary. These could not be done in the limited time available. Our objective was to determine the concentrations of elements in plants and soils along upwind and downwind transects. Since these elements are relatively abundant in the phosphate rock, we assume that they originate in the processing of the ore.

43. The text has been changed accordingly.

44. The text (p. 1-124 of the DES) has been revised to state that these recommended levels are exceeded.

45. The text has been revised to include the implications of the above comment.

Page		Comment
1-132	46	The concentrations shown for trace elements in the Phosphoria formation (1-132) are inconsistent with data for the phosphate rock of the Meade Peak Phosphatic Shale Member (1-61) as maximum concentrations for any type of rock were used for comparison. What is the source of the trace elements in the boiler blowdown? The recommended limit for arsenic by the National Academy of Sciences is not the same as the EPA standard which is .05 mg per liter as maximum (40 CFR, Part. 141.11 in F.R., Vol. 40, December 24, 1975). It should be noted that average concentrations of arsenic exceeded the 1962 USPHS recommended limits of 0.01 mg/l in solution in the water runoff pond and beneficiating pond (as well as the gypsum pond) p. 1-131. This may indicate the potential mobility of arsenic in runoff from mine dumps depending on the mechanisms resulting in the reported concentrations.
1-132	47	What are the concentrations of trace elements in Beker's unsealed beneficiating pond and water runoff pond as well as in the gypsum pond (rather than the boiler blowdown outfall)?
1-133	48	Are appropriately-located wells routinely monitored to detect leakage from the gypsum pond?
1-137	49	Are there data on trace elements in groundwater near the Conda facilities?
1-138	50	Presumably, the units of the table are micrograms/liter rather than grams per liter. Because only dissolved concentrations are shown, total waste loading to the stream is unknown.
1-145	51	The possibility that processing plants may contribute nutrients to the springs should be discussed.
1-147	52	Cadmium and other trace metal data for waste ponds should be included.
1-148	53	The arsenic in water used for public supply should not exceed .05 ppm according to EPA's interim primary drinking water standard regulations promulgated on December 24, 1975. According to State of Idaho data, concentrations of arsenic were at least as high as .05 mg/l in several samples of groundwater used for drinking.
1-148	54	Cadmium has also been detected in well water at concentrations exceeding the EPA interim primary drinking water standard.
1-148	55	Arsenic mobility at Conda is suggested by the single sample from Simplot Well No. 8. Concentrations (0.042 mg/l) approached the EPA standard for public supply (see previous comments).

46. Average values for the phosphate rock member are now shown on p. 1-132 of the DES with reference made to the fact that maximum values are much higher (table 1-7 on p. 1-61 of the DES). The solution called "boiler blowdown" outfall should have been called "gyp-water" outfall-see revision. The text has also been revised in response to the other comments indicated above.

47. The analysis attributed to the "boiler blowdown" should have been called the "gypwater" outfall to the gypsum pond and the text has been so revised. The "gyp water" should be representative of the gypsum pond itself. Data for some trace elements for a beneficiating pond have been added to the text. No significant data were available for trace elements in the runoff pond.

48. The Idaho Division of Environment has obtained most of the data used in this report. It is doubtful that enough is known about the ground water regimen, however, to know if wells analyzed are appropriately located to monitor leaky gypsum ponds.

49. Additional available data for trace elements for three wells have been added to the manuscript.

50. The units are micrograms/litre; the text has been changed accordingly.

51. The text (p. 1-145 of the DES) has been amplified accordingly. The possibility that the phosphate industry could be a source of phosphate in Batiste Springs is already mentioned on pages 1-145 and 1-152 of the DES.

52. Cadmium and vanadium (where available) values have been added to the data.

53. Text has been amplified to include these comments.

54. The text now considers cadmium in well water near the processing plants at Pocatello.

55. Text has been amplified to include this comment.

Page		Comment
1-149	56	The phrase "may contain radium" should be changed to "contains radium".
1-149	57	Since "almost no data are available" to answer the question of whether the leaching of phosphate mine-waste dumps would contribute significant concentrations of heavy trace metals and nutrients to groundwater, the conclusion that short and long-term impacts of toxic elements are likely to be small (p. 1-482) appears largely unsupported by data or by development of theoretical considerations.
1-152	58	Occasional high concentrations of arsenic near the Pocatello processing plants also suggest the contamination of groundwater in these areas. Cadmium has also been detected according to State data.
1-152	59	Concentrations of mercury were relatively high in some surface water (see p. 1-124). Potential causes should be identified. It does not appear that any data were available for some of the listed elements in groundwater in some areas.
1-152	60	Erosion processes acting on mine dumps and pits could conceivably carry trace elements into lakes or impoundments with possible deleterious impacts over the long term. These pathways should be considered.
1-157	61	The first two sentences of the Air Resources Section should clearly specify that the measurements and data are "ambient" concentrations and are not stack emissions. It may be useful to reference the ambient air quality standards as listed on 1-428 and 1-429.
1-159	62	Violations of the 24 hour and 3 hour ambient air quality standards are to be tabulated on non-overlapping basis. The 24 hour ambient concentrations are averaged from midnight to midnight. The data presented as to the number of 3 hour periods exceeding the ambient secondary standards should be presented on non-overlapping 3 hour periods in order to be fully representative of actual violations. The highest non-overlapping 3 hour concentration should be used.
1-160 para. 3	63	The number of 3 hour SO_2 average concentration periods should be changed to non-overlapping periods.
1-161 para. 2	64	What was the number, if any, of the 3 hour average concentrations in excess of 0.5 ppm sulfur dioxide from the discussed monitoring sites?
1-161 para. 2	65	What was the maximum 3 hour average concentration at each site discussed?

56. The text has been changed accordingly.

57. The text has been revised to include other data which by inference are used to support the expectation of only minor increases in at least some trace elements (heavy metals). The revision (p. 1-149 of the DES) is cited to support the statement (p. 1-482 of the DES) that short- and long-term impacts of trace toxic metals are likely to be small.

58. The text has been amplified to include these data.

59. Text has been revised to mention the mercury occurrences. Data for thallium which had not been included (in the list of p. 1-152 of the DES) are now included in the text.

60. This now has been added to the text.

61. The text has been amplified to state this more clearly.

62. The computer printout sheet originally received from the State of Idaho Department of Environmental and Community Services, listed concentrations of 1.00 ppm on January 30, 1975, for six hours (10 through 15). Subsequently, in a letter received from the State of Idaho, Department of Health and Welfare dated October 29, 1975, the same computer printout sheet listed these values as 0.01 ppm. The highest 3-hr. concentration for the month was 0.41 ppm and the highest 24-hr. average 0.12 ppm. Therefore, no violations actually occurred during this period.

The text has been changed accordingly.

63. Corrected data from the State of Idaho, Department of Health and Welfare (received on October 29, 1976) indicates there were no values in excess of standards at Conda during the January-February 1975 period.

Text has been changed accordingly.

64. Measurements at the two sites were made by bubbler samplers, which only record 24 hr. values. The number cannot be determined.

65. This information cannot be obtained, since 24-hr. bubbler samplers were used to obtain the data.

Page		Comment
1-163	66	First sentence - "...occasionally violated with a few miles..." should read "...occasionally violated within a few miles..."
1-163	67	Second sentence - Since the data was terminated in 1974, it is suggested that the possible violations be addressed in the "Past tense" as follows: "Sulfation rate data collected near these plants suggest that both may have caused violations of the annual SO_2 ambient standard within a distance of a few miles." The Beker plant is now operating under a consent order issued in 1973 and since monitoring was started about a year ago, only one violation of the 3-hour standard has occurred. In regard to the Simplot facility, see the General Comments-Air Analysis Comment on Page 1-430 of the DEIS.
1-171	68	In addition to gases being emitted, particulates, including fumes, are emitted during calcining and thermal reductions.
1-171 to 1-173	69	The data cited as EPA data appears to be in error. While we can identify some numbers as preliminary results, the bulk of the numbers do not agree with values in current use. We are also not sure how these numbers were provided to the Department of Interior but are unable to find a record of where they originated. Some preliminary results have previously been provided to the State of Idaho, to the J.R. Simplot Company, and to the FMC Corporation.
1-172	70	Data and discussion of air emissions and ambient levels of trace metals should be added. Some metals may volatilize during processing. Short-term ambient monitoring for trace metals in air was done by EPA Region 10 in the vicinity of the Pocatello processing plants. Unpublished results indicate slightly higher concentrations of cadmium and some other elements when compared to other rural areas in the United States.
1-185	71	The concentrations of trace elements shown as present in vegetation might better be described as being in and on vegetation (unless the elements were removed from the plant exterior prior to analysis).
1-185	72	Quantitative information for only chromium, fluorine, uranium and zinc in vegetation was presented. Actual concentrations in vegetation for cadmium, lithium, nickel, selenium, and vanadium should be shown as these are said to increase with proximity to the processing plants. Measured elements with no indicated increase also should be mentioned.

66. The text has been changed.

67. The text has been changed.

68. The manuscript has been expanded accordingly.

69. The data were obtained from the Office of Radiation Programs, EPA, Las Vegas, Nevada.

70. The Task Force has requested such data. It was not obtained in time for inclusion in the FES.

71. All plant samples were washed prior to the chemical analyses. Therefore, the concentrations measured reflect elements in the plans and not on the plants.

72. Quantitative information has been added. See table 1-18a of the DES. Elements with no significant head have also been listed.

Page		Comment
1-190	73	At elevated levels, cadmium may interfere with animal health. Are cadmium concentrations found in vegetation near the processing plant sufficiently high to adversely affect animals such as sheep?
1-266	74	Trace element constituents of products and by-products of phosphate processing (such as slag) and subsequent uses should be considered.
1-269 para. I	75	Uranium tends to stay with the products in wet-processing of phosphate rock. In the thermal process, uranium also goes to the calcium silicate slag along with radium-226 and most of the radionuclides.
1-270	76	EPA has not indicated that it does not consider radioactivity associated with processing phosphate rock harmful. The Agency considers all radiation exposure as potentially harmful. With respect to the phosphate industry some aspects, for example, indoor radon levels in certain-structures built on reclaimed land, are considered important from a public health viewpoint whereas other aspects are not as significant.
1-342	77	If mine dumps consist of materials significantly higher in trace elements than the existing topsoil, erosion by wind and water and vegetation uptake may redistribute some toxic elements to the surface environment. Data presented in the DEIS are insufficient to determine whether such impacts would be significant from the 3,000 acres of dumps involved in the proposed development (1-338).
1-342	78	Potential long-term impacts of fertilizer products and slag by-products on soils should be considered.

73. In one study (Doyle, J. J., Pfander, W. H., Grebing, S. E., and Piercer, J. O., 1972, Effects of dietary cadmium on growth and tissue levels in sheep, in Hemphill, D. D., ed., Trace substances in environmental health: Missouri Univ. Ann. Conf., 6th Proc. p. 181-186.) from 30 to 60 ppm of cadmium in the diet of sheep for 191 days was shown to reduce growth and feed intake. At only one sampling location, 3 kilometers northwest of the processing plants in Soda Springs area, did concentrations exceed this range.

74. Most of the potentially valuable trace elements, other than vanadium, are contained in the furnace dust, which is stockpiled for possible future byproduct recovery of trace elements. At the Monsanto operation, the dust slurry is pumped directly to storage ponds. At the FMC plant, the dust slurry is passed through a newly installed fluid-bed dryer, and the resulting "prill dust" is stockpiled for possible recovery of gallium and other valuable trace elements based on Company research which has been in progress for quite some time.

This has been incorporated into the manuscript.

75. The text has been amplified accordingly.

76. On September 15, 1975, Mr. Joseph Cochran of the EPA National Environmental Research Center at Las Vegas, Nevada, indicated that the limited data available indicated above - background concentrations, but that there appeared to be no health problems at that time. The text has been modified to more nearly reflect this view.

77. Results of solubility experiments with finely-ground phosphate ore indicate that selenium, vanadium and flouride may approach concentrations that would reduce potential water use. The high sediment to water ratio used in the experiment would only be approached if structural failures of slurry ponds occurred. Wind erosion of fine-grained mine wastes would increase suspended sediment concentrations in neighboring streams but not extensively enough to raise trace element concentrations of levels affecting water use.

Up take of trace elements by vegetation communities will occur at the mine dumps. Initial concentrations will be high and decrease as leaching resolubilized the ogranically bound and remaining inorganic phases and carried them below the root zone of the plants. Consumption of forage by game animals on the affected area is estimated to be low and should have little or no adverse impact.

78. There exists a need to monitor the long-term impacts on soil from applications of commercial fertilizer. It has generally been accepted that the benefits far outweigh the impacts.

Most of the slag use to date has been for road surfacing, subbase material and for erosion control. Some slag has been used in making concrete, but state law now forbids its use in buildings occupied by people. There is no known use of slag being used as a soil ammendment. The areas where it is being used will not impact or contaminate soils that formerly were used for any useful production.

1-385 and 9-89

79. According to the DEIS (9-89), the dump west of the north pit will cover about 0.25 mile of a perennial stream draining to the Blackfoot River. Does this disposal require a Corps of Engineers permit under Section 404 of PL 92-500? The statement that the minesite is not near a perennial stream (p. 1-385) appears to be misleading or in conflict with the foregoing.

1-424

80. Mitigating measures for the mineral resources that are mined would include recovery of trace elements for useful purposes. For resources not mined, methods to mitigate adverse impacts on future recovery operations could be cited.

1-427

81. Will mitigating measures for processing and beneficiation be required as terms of approval for mining plans or leases?

79. The statement on page 1-385 of the DES to the effect that the Blackfoot Bridge Mine is not near a perennial stream is in error. The northwest dump, as shown in Figure 9-4 and as shown in the mine plan, would cover about a quarter-mile length of a small perennial stream. This was an oversight on the part of the mining company in hastily preparing the mining plan to meet the December 31, 1974, deadline. A company spokesman now states the waste-dump plans will be adjusted to avoid encroachment upon any perennial stream or adjacent wetland. In view of the preceding statement, it seems probable that no Corps of Engineers, Section 404 permit will be required. The text has been revised accordingly to reflect this change in dump location.

80. Except for secondary recovery of vanadium it is uneconomical at the present time to recover other elements, and in many cases the recovery technology is not sufficiently developed. As technology develops, it is quite likely that associated minerals will be recovered in response to market demands.

81. Mitigation of impacts from beneficiations and processing will result primarily from enforcement of existing laws and regulations of various Federal and State agencies, expecially air and water quality standards. Although adherence to these laws and regulations is not specifically required as terms of approval for mining plans for leases, Federal Regulations 30 CFR 231.75 requires that wastes from milling or processing ores from Federal leaseholds be managed in an environmentally acceptable manner.

Page		Comment
1-432	82	The table listing the allowable increases under "Prevention of Significant Air Quality Deterioration" lists the concentrations as milligram per cubic meter. The values should be changed to micrograms per cubic meter.
1-432	83	Please reference where footnote "*Only second highest concentration should be considered" originated.
1-434	84	SO_2 emissions from the phosphate industry's sulfuric acid plants are not all being controlled by constant control systems. Beker's older sulfuric acid plant is not controlled by either a wet scrubber or a double contact process. The newer sulfuric acid plant is a double absorption plant.
1-463	85	The third paragraph states: "The adverse impact resulting from the interruption of aquifers during mining cannot be avoided. The extent of the area that will be influenced by this disruption around the mined area will vary depending on various aquifer properties, but will be of only local significance." Once an aquifer becomes contaminated it could take centuries for the aquifer to be flushed or contaminants to be reduced.
1-482	86	Mobility of arsenic in groundwater is also suggested. The DEIS fails to recognize the inadequacy of the presented data to support the conclusion on toxic element impacts.
1-464	87	Surface water criteria for aquatic life rather than domestic water supply may be more appropriate for evaluating toxic element impacts. Since quantitative data on leaching from mine dumps and such discharges as borehole pumping are meager or lacking, the basis of the conclusion is not clear.
2-63 to 2-65	88	Exploratory drilling should be controlled to prevent mixing between aquifers.
4-2 to 4-9	89	Mine support facilities (buildings, parking lots, equipment yards, guardhouse, fuel storage and waste treatment facilities, etc.) all need to be precisely located in order to determine the effect on storm runoff. An estimate as to volumes, as well as exact locations of storm water discharges, of effluents from these sources must be indicated.
4-8	90	It is indicated that ore will presumably be hauled by truck or conveyor system to the railroad. This should be made more specific as either system that is built will have a different effect on stormwater runoff.
4-9	91	No map is available to indicate locations of pumpout facilities from pit and groundwater, discharge points, diversion ditches (including French drains), and treatment device locations.

82. The text has been changed accordingly.

83. The reference is 40 CFR 52.21 (b) (1). It has been added to the text.

84. The text has been corrected to reflect this.

85. The chance of contaminating aquifers because of disruption due to mining is slight: Analyses of leachates from waste dumps in Bloomington Canyon, of water from waste dumps and sediment catchment ponds at the Maybe Canyon Mine, and of water from wells in the Phosphoria formation at the proposed Diamond Creek Mine, indicate that the concentrations of dissolved constituents in these waters differs insignificantly from that in water if nearby streams and springs.

86. The manuscript has been revised to reflect this comment.

87. The text has been revised to show that mercury did exceed the EPA recommendations for freshwater habitat. The Task Force believes that the available data along with theoretical considerations are sufficient to warrant our assumption that deleterious concentrations or most toxic elements will be mitigated by natural factors. However, the recognition that certain elements may not be adequately mitigated is mentioned here and throughout the text. In addition, monitoring programs are being developed by appropriate agencies to consider the occurrence before and during mining of trace elements which may be potentially toxic.

88. Exploratory drilling is controlled. All drill holes must be cased or plugged with concrete, depending upon the local situation.

89. Locations of all mine support facilities will be required for final consideration of approval or disapproval under Federal regulations 23 CFR 231.

90. Alumet proposes to haul the ore by truck to the beneficiating plant and by conveyor from there to the railroad load out facility. See revised text.

91. These engineering details will be required for final consideration of approval or disapproval under Federal regulations 30 CFR 231.

Page		Comment
4-9	92	Specify the exact process which will be used by the beneficiating plant. This makes a difference as to amounts of water used and discharged.
4-16	93	A more elaborate precipitation study is needed. The 10 year, 24 hour rainfall event must be specified. How was it determined that 12 inches of runoff would occur from 28 inches of rainfall?
4-17 to 4-19	94	Not enough water quality samples were taken on Diamond or Stewart Creeks to adequately determine the water quality.
4-17 to 4-19	95	No biological study was done on either Diamond or Stewart Creeks. This data is necessary to determine the effect of mining operations on the water quality of the referenced streams.
4-26	96	What are the depths, capacities, and locations of the 10 acre sediment ponds? What effluent quality is expected?

92. According to Alumet, the rock will be beneficiated in a battery of semiautogenous mills and cyclones with a slime removal system.

93. NOAA Atlas 2, v. 5, for Idaho shows that the 10-year, 24-hour rainfall event in the mine area is 2.2 inches. This magnitude and frequency of precipitation is specified by EPA as a design criteria for excess (free-board) space to be provided for impoundments of process waste water at phosphate-processing plants (see Guidelines in Federal Register). This is an inadequate criteria in areas of snow accumulation and may be the reason for recent failures of waste-water ponds at Conda. Melt of snow accumulation each spring at the Diamond Creek mine site would cause increases of more than 2. 2 inches in the pond levels. The 12 inches of runoff from the annual average rainfall of 28 inches was determined from rainfall-runoff curves developed from rainfall and runoff data for river basins in eastern Idaho.

94. Considerably more data are now available than those shown. The text has been amplified to include these data, which now have been used in making the interpretative statements.

95. The text has been amplified to indicate that the Idaho Division of Environment is now making comprehensive water quality studies and inventories of benthic populations, for Diamond Creek.

96. As stated on Page 4-26 of the DEIS, the mining company did not specify the depths of the 10-acre sediment ponds. Thus, proposed capacities are unknown. The company states the design of mechanical measures to control runoff and to control sediment will "take into consideration the amount of storm runoff from a storm of given frequency." If capacities are designed on a storm of given frequency, the ponds probably would be seriously underdesigned and would not accommodate the large volumes which runoff during the annual snowmelt periods. Retention times would be short, and quality of the effluent would not be sufficiently improved. One of the 10-acre sediment ponds is proposed on Cabin Creek east and upstream from the mine pit, and the other is on the Diamond Creek Valley floor northwest of the north end of the pit upstream from the mouth of Timothy Creek. In addition, check dams are proposed in each of eight small draws upstream from the pit. Depths and capacities of these small catch basins are not specified. Retention times or effluent quality cannot be estimated with available data. Adequate design, based upon hydrologic data, will be required for final consideration of approval in conformance with 30 CFR 231.

4-27 97 98 Using the data supplied by the draft EIS, the conclusions as to quantities of sediment loads which will enter the streams cannot be supported. The amount of sediment entering Diamond Creek must be specified. What effect will this sediment have on the stream fisheries and biological organisms?

4-32 to 4-36 99 Has the option of routing stormwater flow around the mine to keep it from becoming contaminated been explored? If so, what are the locations, quantity, and quality of diversion runoff expected?

4-32 to 4-36 100 It is indicated on page 4-26 that erosion of the stream banks downstream, due to the discharge, may occur. Has any study been instituted to see if stream erosion could be minimized by separating the effluent into several streams and discharging at various locations along the length of Diamond Creek?

4-34 101 Indication is made that appropriate buffer and filtration strips will be provided. What is the definition of appropriate?

4-34 102 The statement is made that "Erosion and siltation controls will be based on recommendations of EPA and other significant standards." What does this mean? EPA will issue the company a NPDES permit to discharge based on effluent guidelines and Idaho Water Quality Standards. Specific controls will not be specified. EPA will specify effluent limitations but not devices to achieve these limitations.

97. The amount of sediment that will enter Diamond Creek was estimated from description of component segments of the lands that comprise the Diamond Creek watershed. According to the proposed mining plans, various changes to the watershed would occur throughout the period from now until 1999. By using the same analysis procedures for before-after mining, and allowing for the development and reclamation of proposed mines, estimates of proportional changes in sediment yield were made. The accuracy of the estimates of amounts of sediment movement cannot be substantiated nor refuted until the time and conditions that were predicted to occur and are intensively monitored. The predicted changes are based on an evaluation of the proposed mining plan and of the conditions that have evolved at old mines, both abandoned and operating, in the area. These estimates indicate a maximum of a 2½ fold increase in the sediment loads of Diamond Creek from the Diamond Creek mine to Lanes Creek, as stated on page 4-27 of the DES. The combined impacts of the Diamond Creek mine and other mines that will impact Diamond Creek are presented on page 1-354 of the DES.

The impacts on fisheries are described on page 4-30, and on pages 1-382 and 1-384 of the DES.

98. A revised, amplified mining plan filed with the USGS in July, 1976 provides for the capture of all storm runoff from mine facilities and pumpage from pits to be captured and used as makeup water in processing the ore. There will be no discharge of these waters to Diamond Creek. Appropriate descriptions of this amplified mining plan have been incorporated into the text.

99. See response to 97 and 98.

100. See response to comments 97 and 98.

101. Under the revised mining plan, buffer and filtration strips will not be necessary, inasmuch as all runoff from disturbed areas will be impounded for use in dust control and processing.

102. Text has been revised to be more explicit.

Page		Comment
4-35	103	Monitoring the water quality prior to release to the stream or injection to the groundwater is good but at what contaminant levels will release not be permitted?
4-35	104	Insufficient information on water quality of existing catchments in mine pits precludes estimation of impacts of the proposed permanent lake. Could bioaccumulation of trace elements occur?
4-43	105	Failure to stockpile marginal grade ore may hasten the day when new areas must be mined.
4-45	106	What is the relative probability that the lake could have poor water quality and fail to provide desirable fisheries, recreation, and aesthetic impacts?
4-68 to 4-69	107	Corrective measures should be planned to reduce the long term impacts on the surface waters.
5-4	108	Because the DEIS should discuss what is actually proposed, the latest version of each mining plan should be presented. Why omit the July 1975 modification to the Dry Valley plan?
5-17	109	Dispersal of trace elements through catastrophic failures such as the sediment pond failure at Maybe Canyon should be considered. No data for trace elements was shown.

103. When contaminant levels reach NPDES effluent guidelines, further release will be prohibited.

104. Bioaccumulation of one or more of the many trace elements in the phosphoria formation would be from within the phosphoria itself, or from sediment derived from the phosphoria, and not from solution in the lake water: Analyses of leachetes from waste dumps at the Paris-Bloomington mine, from waste dumps and sediment catchment ponds at the Maybe Canyon mine, and from ground water from the phosphoria formation at the proposed Diamond Creek mine, indicate that the concentrations of dissolved constituents in these waters differs insignificantly from that in water in nearby streams.

This suggests that the chances for bioaccumulation in the proposed lake is about the same as for water ponded naturally in the phosphoria formation--extremely low and almost neglible.

105. Marginal grade ore, if stockpiled, would likely not be utilized because of technology and economics until the readily-accessible higher grade ores are exhausted.

106. The probability is low. Available data on leachates from the ongoing Maybe Canyon mine and the past mining of Paris-Bloomington indicate that the leachate does not differ significantly from the natural waters.

107. The first paragraph on page 4-68 of the DES refers to the mitigating measures that apply to both Diamond Creek and Swan Lake Gulch mine sites. Corrective measures are discussed in detail on page 4-34 of the DES. Repetition on page 4-68 appears unnecessary. If desired, at the end of the fourth paragraph, following "to natural drainages," we could add "Corrective measures planned to reduce long-term impacts on the surface waters are described in Part 4.1."

108. The modification of the Dry Valley mining plan has been incorporated into the text.

109. No data for trace elements are available for the period of the pond-failure. However, the text has been changed to recognize the dispersal of trace elements on particulate material during such events and discussions as to why the dissolved concentrations are not likely to be high is made, or reference has been made to appropriate discussion elsewhere. Trace element data for low flow conditions on Maybe Creek are cited.

5-18

110 { The text does not clearly delineate water samples thought to be presently affected by current mining from those in areas subject to future operations (e.g. Kendall Creek).

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110. The status of stream (see p. 5-18 of the DES) with respect to past, present and (or) future mining operations are thought to be as follows:

Station(see p. 5-18)	Probable Status with respect to Mining
1.	Probably somewhat affected by exploration; in future it may be affected by mining on Husky leases.
2.	Probably affected by present mining.
Station	**Probable status with respect to mining**
3.	Impacted by present mining.
4.	Severely impacted by past and present mine dumps.
4a.	Slightly impacted by present and past mining. Future mining will continue to impact the site.
5.	Impacts thought to be minimal now; mostly from exploration above the site. Impacts in the future likely to be greater because of mining up Dry Valley and possibly by future transportation to other leases.
6.	Probably receives suspended sediment from present mining and dump construction at head of Mill Canyon and such impact will probably increase in the future.
6a.	This site is farther downstream than station 6 and hence impacts will be "diluted."
7.	Present and future impacts from mining are likely to be minimal.
8.	This site is probably being presently affected by mining operations which contribute suspended sediment.
9.	Probably receiving some suspended sediment from present mining operations; effects are greatly "diluted" at this point however.
10.	Similar to station 9 but farther upstream.

5-20

111. If the phosphorus of the water sample (927 ppm) is associated only with the suspended sediment (2,380 ppm), this corresponds to 39% P. This seems highly unlikely as ore is generally less than 31% P_2O_5. Thus, the data indicate that a major fraction of P is in solution or erosion of a fraction richer in P is occurring.

5-28

112. What is the legal basis for provisional approval of ongoing operation of the Beker mining plan? At what other "proposed" sites are mining activities already underway?

5-37

113. Insufficient information is available to evaluate the alternative of mining in an existing area (Maybe Canyon) as opposed to development of a new area.

6-1 to 6-21

114. Some information is being collected for an environmental assessment for a facilities planning program for the west shore of Bear Lake. This information although not yet

111. The point that 2380 ppm of sediment in water cannot account for 927 ppm of P is well taken. However, one cannot attribute this to soluble phosphorus at the pH and calcium content of the in-place sample (see p. 1-151 and 1-360 of the DES). For the analysis in question one probably has to assume that analyitical and (or) sampling errors for phosphorus and (or) sediment are responsible for the disparity. The general conclusion that most of the phosphorus comes from the sediment is still valid; however, the paragraph on p. 5-20 has been appropriately revised.

112. In accordance with established requirements of the Geological Survey, individual environmental analyses were prepared for new long-term mining reclamation plans submitted by the four existing mining operations. These analyses concluded that provisional approval of those plans would not constitute major Federal action having a significant effect on this quality of the human environment. As noted in the DES these operations in question are, the North Henry, the Wooley Valley, the South Maybe and the North Trail mines.

113. The revised mining plan calls for combined operations at both North Maybe and South Maybe sites in order to maximize ore recovery and minimize mining surface disturbance.

114. The only areas of overlap are surface waters - with possible contamination of Bear Lake with mineral from the Paris-Bloomington mine -and socioeconomic factors. The assessment made a housing survey in the Paris-Bloomington area, which was not directly related to the proposed mining.

Page		Comment
		complete might be useful to the development of an environmental assessment or statement on the Paris-Bloomington mine.
6-2	115	Interrelationships of development on federal and private land should be shown.
6-20	116	The draft EIS does not address the potential impact to the water supply for Bloomington, Idaho. Bloomington presently gets its water from Fred's Spring located approximately 3 miles west of Bloomington up Bloomington Canyon. It is not certain whether the proposed Earth Sciences mine might impact this spring either by direct disturbance or by indirect effects on the groundwater system. However, since the EIS states that, "Many springs flow at elevations about that of the proposed mine," and that "The discharge to nearby springs also could be reduced," the potential of a water quality or quantity impact must not be dismissed as presently done in the draft EIS.
6-20 to 6-21	117	The Bloomington phosphate mine could have a very significant impact on the water quality of Bear Lake. According to EPA's recent eutrophication study, Bear Lake is seasonally phosphate limited and an oligotrophic lake with a mesotrophic pollutant loading rate. This eutrophication study, currently in draft form, estimates that nearly half of the present phosphate load is pumped into Bear Lake via the Utah Power and Light pump station located between Bear Lake and Mud Lake (Dingle Swamp). Pollutants in any discharge or runoff from the Bloomington mine or plant to Bloomington Creek, Paris Creek or directly to Mud Lake will, to some unknown degree, find their way to Bear Lake, thus aggravating the already high pollutant loading which currently enters the lake via this pump station. The draft EIS is totally inadequate in evaluating this potential impact, which could be highly significant because of the phosphate limited nature of Bear Lake and the high potential for concentrating phosphate in any discharge from the mine or processing operation.
6-25	118	How will the company provide substitute water supplies to replace springs affected by mining?
6-27, 10	119	Although the proposed processing plant is claimed to be independent of the Paris Bloomington mining plan approval, the federal lease phosphate is large, suggesting that economic operation of the plant may well depend on federal action.
6-29	120	Environmental impacts associated with the fertilizer plant in Utah and the planned vanadium recovery plant should be considered.

115. The raw phosphate ore production of Southeast Idaho for the year 1975 was approximately 7.4 million tons. The source of this ore was about as follows:

Indian Land, Indian Mineral	2.0 mm tons
Patented Land, Patented Mineral	1.5 mm tons
Federal Land, Federal Mineral	2.4 mm tons
Patented & State Land, Federal Mineral	1.5 mm tons

The ore reserves of the study area as calculated in the Garrand Report show 76 percent of the total reserves are on National Forest Lands. An insignificant amount lies on other Federal lands, the remainder is contained in State and privately held lands.

With time and depletion of off-Forest reserves, mining will move inexorably to the National Forest.

116. Fred's Spring is about 2½ miles west of, and is hydraulically separated from the minesite by the Bannock Thrust fault and other geologic structure; mining will not affect this spring. Mining operations at the proposed minesite to obtain a 20,000-ton ore sample interrupted virtually no ground water. This indicates that other nearby springs, mostly in Tertiary or Triassic formations, are not hydraulically associated with the Phosphoria formation and will not be affected by mining operations. Analyses of water draining from the waste dump at the site, from sediment-catchment ponds at the North Maybe mine, and from wells in the Diamond Creek minesite, indicate that mining operations have little effect on the concentrations of dissolved constituents in ground waters of this area, as stated in the DES.

117. The text has been amplified to reflect this concern.

118. Company officials have stated that they will replace artificially any water loss due to mining operations by Earth Sciences. The water will be replaced by building ponds, piping from other sources, or other practical means. Replacement will be required by lease stipulation.

119. Of the more than 1,000 acres involved in the project (excluding the 475 acres involved in the prospecting permit applications), only 66 acres are on Federal leasehold.

120. An environmental impact statement on the proposed fertilizer plant as well as an alunite processing plant proposed as part of the complex in Utah is now under preparation. As of January, 1977, the draft statement has been released for review.

Page		Comment
7-18	121	Impacts to the surface waters and ground waters quantity and quality appears highly probable. More detail on this situation is needed.
9-43	122	Since the dump at Trail Creek site covers two springs and subsequent slope failure possible, it may be wise to relocate the dump.
10-49	123	What are some of the less desirable constituents which may enter the groundwater due to slurry transport?
General	124	As a public information document, the EIS should provide full citations for all significant source material used in its preparation.

121. The text states that impacts will occur (see pages 7-17, 18 of the DES): maximum runoff from wastes and dump will be 100 cfs. more than 1 mile of stream channel will be permanently buried; sediment transport will increase 5 to 9 times during, and 2 to 5 times after mining; the dissolved constituents may increase, but probably not significantly for the resources, as described in detail on pages 1-357 through 361 of the draft statement.

Hydrologists estimate, on the basis of a specific yield of 10 percent, that each million cubic yards of saturated material removed from the proposed pits at this site would release about 60 acre feet of water. The proposal is to remove about 100 million cubic yards of material, including both waste and ore, by the year 2000. Probably, about half of this material is saturated as the bottom of the proposed pits areas much as 300 feet below the level of Dry Valley Creek. If half is saturated, about 3,000 acre feet of water will drain from the excavated material - an average of 125 acre feet per year for 24 years.

Calculations based on recent test pumping indicate that at maximum depth water entering the pits from the Rex Chert could be as much as 100 gpm, or about 160 acre feet per year. If we assume that during the life of a pit an average of 50 gpm enters, then about 80 acre feet per year would enter the pits.

Under these assumptions, water removed annually at the proposed Dry Valley mine would be about 200 acre feet. This is equal to 125 gpm or 0.28 cfs.

122. The text has been modified accordingly to include this as a mitigating measure and alternative.

123. Slurry transport of the pulverized ore would increase the opportunity for the constituents of the ore to be dissolved by the fluid of the slurry. Data on solubility are included in the FES.

The small possibility of leaks from tanks at either end of the conveyance system and the possibility of breaks in the line provide a small increase in the opportunity for dissolved undesirable constituents to escape to the ground or surface water systems. Other components of the environment (temperature and ph) and the low inherent solubility of most of the components of the ore make the various oxides of nitrogen the most likely component of the ore that would appear as a pollutant.

124. Additional references to source material have been added as appropriate.

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

JUL 2 9 1976

Director
Geological Survey
U.S. Department of the Interior
National Center, Mail Stop 108
Reston, Virginia 22092

Dear Sir:

This is in response to your transmittal dated April 26, 1976, in which you invited the Energy Research and Development Administration (ERDA) to review and comment on the U.S. Department of the Interior, Geological Survey draft environmental statement concerning the development of phosphate resources in southeastern Idaho (DES 76-15).

We have reviewed the statement and have determined that the proposed action will not conflict with current or known future ERDA programs within the locale of the proposed action and, therefore, have no comments to offer.

No response required.

Sincerely,

W. H. Pennington, Director
Office of NEPA Coordination

cc: CEQ (5)

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUL 13 1976

United States Department of the Interior
Director, U. S. Geological Survey
National Center
Mail Stop 108
Reston, Virginia 22092

Dear Sir:

This is in response to your letter of April 26, 1976, inviting our comments on the Draft Environmental Impact Statement on the Development of Phosphate Resources in Southeastern Idaho.

We have reviewed the statement and determined that the proposed action, per se, will not adversely affect any activities subject to regulation by the Nuclear Regulatory Commission. Accordingly, we have no comments to offer.

Thank you for providing us with the opportunity to review this draft environmental impact statement.

Sincerely,

Voss A. Moore, Assistant Director
for Environmental Projects
Division of Site Safety and
Environmental Analysis

cc: Council on Environmental Quality (5)

No response required.

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STATE OF IDAHO
OFFICE OF THE GOVERNOR
BOISE

CECIL D. ANDRUS
GOVERNOR

TESTIMONY OF

CECIL D. ANDRUS, GOVERNOR

STATE OF IDAHO

BEFORE THE

INTERAGENCY TASK FORCE ON

PHOSPHATE DEVELOPMENT IN

SOUTHEAST IDAHO

HOLIDAY INN, BOISE, IDAHO

8:30 A.M. - SEPTEMBER 13, 1976

My name is Cecil D. Andrus, Governor of the State of Idaho.

The Draft Environmental Impact Statement for the Development of Phosphate Resources in Southeastern Idaho predicts and I quote, "The remote, open and undeveloped character of much of the area will be irreversibly and irretrievably altered. Existing life-styles with their emphasis on aesthetics, agriculture and range, and outdoor recreation would be radically altered." There is no better explanation, or justification, for our deep concern about the inadequacies of the draft statement.

Repeatedly, in recent years, the citizens of Idaho have spoken for protection of our environment, conservation and wise use of our natural resources, perpetuation of our agricultural economy, and continuance of our high quality of life.

At the same time the citizens of our State have spoken for a healthy economy with meaningful employment for today's job seekers and their sons and daughters. We need to be able to make a living in Idaho and at the same time have something to live for. To this end, I will continue to insist that the development of the huge

phosphate deposits in Southeastern Idaho be carried out in an orderly and environmentally sound manner. We seek long-range stability for the existing phosphate industry, not boom and bust development.

The development of this Draft Environmental Statement has been a sad commentary on intergovernmental relations. The Federal Task Force preparing the draft statement did not make a genuine effort to solicit substantive and coordinated State input into the preparation of this draft. When, finally, input was requested, Federal time deadlines prevented the gathering of meaningful data.

As a result, I am not surprised that we have major objections to the content of the Draft. It is one-sided and obviously incomplete. The most serious concern that I have regarding the Draft Environmental Statement is the unwillingness of the authors to consider, as alternatives, changes in Federal law to protect Idaho's environment and lifestyle. I am particularly concerned that a prospecting permit

could become an automatic license to develop a mineral resource regardless of environmental and social consequences.

We will not allow violations of State law or regulations promulgated appurtenant to that law. The Draft EIS should propose mechanisms to assure that State law will be adhered to rather than predicting the inevitability of violations.

Another of my concerns is the adequacy and accuracy of the background data for the Draft EIS. Many State agency reviewers have noted errors in the data used and omission of important information which was either provided or available. Much of the data provided in the Draft EIS is of a background nature and much of it is repeated several times. This mass of data has produced a document that discourages review and use.

In this regard, I agree with the conclusions of the recent report of the Council on Environmental Quality.* The report concluded that, "The core of an EIS should be its analysis of the sig-

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* Environmental Impact Statements - An Analysis of Six Years' Experience by Seventy Federal Agencies. (March 1976)

nificant impacts of both the proposed action and reasonable alternatives of the human environment. The purpose of an EIS should be to communicate this analysis to all decision-makers and to the public in a form that is clear in content and manageable in size. Descriptive material that is not central to understanding the impacts of the alternatives should be summarized, referenced or omitted."

The Draft in question here today does not meet these standards. In terms of volume alone, the Regional Statement devotes 306 pages to a description of the existing environment while only devoting 82 pages to the environmental impacts and 37 pages to alternatives.

Many agencies of the State of Idaho have carefully reviewed the Draft Environmental Impact Statement and will present their individual comments this morning as a part of the State's testimony. I will briefly summarize their concerns.

The Department of Water Resources believes the impact of the proposed development on water rights and stream values is not adequately addressed. They found the alternatives and analysis of

Volume II inadequate and often in conflict with Volume I. Further, a monitoring program is not proposed despite acknowledgements of data deficiencies.

The Department of Health and Welfare feels the proposed action would violate State and thus Federal law. They found information about the cumulative pollutant impacts on the Blackfoot River and Reservoir, about radiation, and significant deterioration of air quality inadequate. They also expressed concern about a water quality monitoring system, a mechanism for coordination of mitigation efforts, and burdens on public water supply and sewerage systems.

The Transportation Department believes moving people should receive as much consideration as moving rock and electricity. They will not have funds to provide an adequate roadway system for the proposed development without a reduction of service to other parts of the State.

The Department of Lands has found the following areas were inadequately discussed in the Draft: forest products resources, impacts on the livestock industry, demand for agricultural water,

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1. The concerns of the State agencies have been addressed to the satisfaction of those agencies in the FES through the joint Federal-State team which prepared the FES.

and demand for the existing labor force. This Department also believes recent experiments may demonstrate revegetation will be more successful with introduced species.

The Department of Fish and Game has prepared voluminous comments on the Draft. It is particularly concerned about the lack of delayed current data necessary to adequately assess the impacts on the fish and wildlife resources of the area and have need for additional time in which to conduct studies prior to the expansion of additional mining operations. The Department feels mitigation should include compensation for unavoidable losses. While the Draft estimates wildlife losses, no direct estimate of fish losses is offered. Adequate measures should be taken to prevent increases in sediment loads. The Department particularly objects to the phrases such as "as feasible" and "whenever possible" which are liberally sprinkled throughout the Draft when proposals for reducing adverse impacts are discussed. The Department of Fish and Game feels the fish and wildlife impacts associated with human population increases are not adequately addressed.

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The Public Utilities Commission has noted that proposed expansion would require 50% more natural gas than is currently being consumed by the industry. The proposed development would also require 1159 megawatts of additional capacity by 1986, plus an estimated equal amount of capacity for residential, commercial and other industrial expansion. The draft contains data errors and generally fails to adequately address the energy area.

The Department of Parks and Recreation feels the Draft does not adequately assess the impacts on community recreation resources and does not take into account the impact of transferring recreation use to areas outside the region. The Department of Employment has found several data errors in the Draft. The Office on Aging feels that more serious consideration must be given to the socio-economic impact on small communities and especially those people living on fixed incomes.

The Idaho Department of Agriculture recommends that revegetation take place immediately after mining to protect water quality. They

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are concerned that increased electrical energy demand will raise prices which may force many out of the irrigated farming business. The Department also feels that the State must vigorously enforce State law to assure protection of our agricultural industry.

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I have noted that several Federal agencies, in addition to State agencies, have problems with the Draft EIS. The Department of Health, Education and Welfare, Region X, Seattle, said - "Our basic concern with this statement (then) is that it does not evidence a strong commitment by the agencies involved to encourage and take actions to lessen adverse impacts...." Their comments also discuss the adequacy and accuracy of the Draft EIS in the areas of educational personnel and facilities, health care manpower and facilities, housing supply, energy rate increases, and aesthetic values. This Federal agency shared the concern expressed by several State agencies that: the Draft EIS did not propose a mechanism for close scrutiny of the proposed action to protect the environment.

2

The Environmental Protection Agency, Region X, Seattle, has formally rated the Draft EIS "inadequate," an unusually harsh judge-

ment. EPA also feels that the comprehensive program statement should address just the regional impacts with a separate environmental supplement for each mine plan and processing plant as sufficient information and new technologies become available, and, as the demand for the resources from that facility become necessary. EPA found increased examination of the following factors necessary: various processing technologies, current phosphate development in the U.S. and the world, alternative sources of phosphate fertilizer, phased development of the phosphate field, impacts of alternative development on private lands, and mitigation measures.

2

I continue to be puzzled by the "rush" job atmosphere for completion of this EIS. The hurried program has resulted in an inadequate draft document and more time has been wasted than saved.

However, on August 16, 1976, Secretary of Interior Kleppe corresponded with me offering to formulate a joint Federal-State team to prepare the final impact statement, taking full account of all inputs. A copy of the Secretary's letter is attached. I accept

2. The concerns of all agencies, organizations, and individuals were considered and addressed by the joint Federal-State team in the preparation of the FES.

the Secretary's offer and name the following people as State team members:

1. Kenneth Stolz, Natural and Physical Resource Planner
   Bureau of State Planning and Community Affairs
2. Terry Maley, Administrator
   Earth Resources Division, Dept. of Lands
3. Steve Allred, Administrator
   Planning Division, Dept. of Water Resources
4. Ralph Pehrson, Environmental Coordinator
   Department of Fish and Game
5. Al Murray, Chief, Bureau of Water Quality
   Dept. of Health and Welfare

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I also strongly recommend that the Environmental Protection Agency be named to the team.

We realize that ultimate responsibility for the content of the final statement rests with the Federal Government, but strongly believe that a much improved document can be written with fresh insights from a Federal-State team. The authors of the Draft EIS must not be given the sole responsibility for writing the final draft of what could be

2 the most significant Environmental Impact Statement ever developed in Southeastern Idaho.

Thank you.

STATE OF IDAHO
DIVISION OF BUDGET, POLICY PLANNING AND COORDINATION
BOISE, IDAHO 83720

CECIL D. ANDRUS
GOVERNOR

H. W. TURNER
ADMINISTRATOR

September 24, 1976

M E M O R A N D U M

TO: Michelle Liebel, State Clearinghouse

FROM: Kenneth Stolz, Natural and Physical Resource Planner

RE: Draft Environmental Impact Statement - "Development of Phosphate Resources in Southeastern Idaho"

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Attached please find my comments regarding the above statement.

EQUAL OPPORTUNITY EMPLOYER

Comments of Kennoth Stolz, Natural and Physical Resources Planner, on the Draft Environmental Impact Statement, Development of Phosphate Resources in Southeast Idaho.

We are very concerned about the manner in which State input to the Draft Environmental Impact Statement was solicited. We can find no instance where State agencies were formally contacted in writing to the Department Head requesting State input as to what ought to be included in and/or covered by the Draft. It is fairly common practice on a Draft of this magnitude to provide a proposed document outline or scope of work for comment by interested agencies and citizens.

When State input was finally requested in a coordinated manner unreasonable timeframes were imposed on review. In July of 1975, the Governor requested preliminary review copies of the Draft EIS. We received these five volume sets on October 8th, and were requested to provide all comments by October 24th. The State of Idaho could not make a meaningful response in two weeks. Through Herculean efforts by State agency staffs, we were able to provide general comments on the preliminary draft, but this could, in no way, be construed as "considerable data and assistance .... from State .... agencies" as deemed necessary by former Interior Secretary Morton when he formed the task force.

A meeting between the task force leader and concerned State Department Heads was held December 8, 1975. The Department Heads agreed that their agencies would review another preliminary draft and provide an estimate of the time necessary to provide comment. It was determined that review could be completed by March 1, 1976. On January 9, 1976, we were provided parts of a different preliminary

draft which were to be combined within the format and content of the October Draft, but with the technical corrections of the December Draft. Then on January 16th, we were requested to provide all comments by January 26, 1976, so that the Draft could be filed with the Council on Environmental Quality by February 27, 1976. The Draft was actually submitted April 23, 1976. Despite the changes in review material and the short timeframe, we were again able to provide some general comments but certainly not corrections of all the policy, legal, and factual errors.

However, we were quite pleased to hear of the formulation of the joint Federal-State team to work on the final EIS. We look forward to a cooperative and constructive working arrangement to improve the Draft document.

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We believe the Draft EIS can be significantly improved by considering several alternative levels of development and assessing the impacts associated with these alternative levels. A much more useful decision-making document can be provided in this way as opposed to the present "all or nothing" assumptions.

We also believe the Draft can be improved by suggesting coordinative mechanisms as alternatives and mitigation measures. One such possible mechanism might include notifying the State immediately upon receipt of any application for prospecting permit or lease, inviting the State to participate in all technical examinations conducted prior to approval of a permit or lease, providing the State the opportunity to comment on all environmental analysis reports prepared on applications, and permitting the State to specify stipulations on the permit or lease to assure compliance with State law.

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1. All of the areas of suggested improvement have been considered by the Task Force and appropriate modifications and/or additions have been made in the text.

This could be formalized through a Memorandum of Understanding.

Another area of the Draft that can be improved is the discussion of significant deterioration of air quality. A study has recently been concluded for the State of Idaho which evaluates the opportunities for reclassification of areas under the EPA prevention of significant deterioration of air quality regulations. A copy of this study will be made available to the joint team. A reclassification of Southeastern Idaho areas might significantly alter predicted environmental impacts for the area.

Another area of the Draft that we feel can be improved is the discussion of alternatives. We believe the Secretary of Interior can exercise more discretion in his actions to protect the environment than portrayed in the Draft.

We appreciate this opportunity to present some of our concerns and wish to reiterate our commitment to a cooperative joint effort in preparation of the final EIS.

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STATE OF IDAHO
DEPARTMENT OF AGRICULTURE
4696 OVERLAND ROAD
P. O. BOX 790
BOISE, IDAHO 83701

TO: Mr. Shirl C. Boyce, Jr., Chief
Bureau of State Planning and
Community Affairs

DATE: May 25, 1976

FROM: The Idaho Department of Agriculture

SUBJECT: The Department's response to the Draft Environmental Statement, Development of Phosphate Resources in Southeastern Idaho (DES 76-15)

1. Water: Supply and Quality

The Department of Agriculture is insistent that there will remain an adequate supply of clean water for livestock and for arable land irrigation.

1 Forage production and range availability will be irreversibly affected where revegetation is impossible or impractical. The EIS indicates that nearly 2000 AUM's will be irretrievably lost annually by the proposed mining operations. The Idaho Department of Agriculture recommends that revegetation take place immediately following the removal of phosphate ore and after back-filling, to conform to the topography and that it becomes aesthetically acceptable. It should provide improved water quality and sediment control.

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2. Air: Toxicity and Emissions

2 Toxicity of air, particularly downward from beneficiation plants can create chronic fluorosis in animals and the emission of fluorine concentrations in the ambient air may dangerously increase the fluoride content of forage. This is of great concern to the livestock industry. Exacting quality standards by the State should and must be rigidly enforced.

3. Soil: Erosion and Productivity

Soil erosion and channel degradation factors are necessarily great in this type of mining operation that is so disruptive to the terrain. The reduced soil productivity, permeability and infiltration rates of disturbed soil
3 become unavoidable in mining operations. Water run-off will exceed the percolation rate. Extensive fertilization will by necessity be required to help restore proper vegetation of both native and non-native species of grass. Even then, it will probably never equal that of the natural or undisturbed surroundings. The strictest controls cannot be played down if the phosphate mining lease applications are approved.

4. Socio-economic Effects

Not to be minimized, the socio-economic development will have some adverse
4 effects particularly on the older residents, as well as to create beneficial jobs to the rural population of this area. The fixed-income citizens, may and probably will, have their purchasing power recede, while others' will increase. The religious and moral considerations for the native population of this section of the State may suffer deterioration during the build-up and plant construction phase.

EQUAL OPPORTUNITY EMPLOYER

1. The EIS so states that the mining companies will be required to shape dumps to blend with the topography, backfill pits where feasible, and revegetate promptly.

2. The control of emissions from both beneficiating and processing plants is under the jurisdiction of the Division of Environment, Idaho Department of Health and Welfare.

3. We concur in your concerns.

4. We concur. This is so stated in the text.

5. Energy: Shortage and Cost of Electricity

Shortages of electrical power required for thermal reduction of phosphate ore may hasten conversion to the wet process for production of phosphate chemicals. This process would eliminate high-temperature gaseous emissions. Too, the tremendous electrical energy required, estimated at 140 billion kilowatt hours, by year 2000 may precipitate a spiraling increase of cost of electricity to Idaho's underground water-users, which would force many out of the irrigated farming business. We must definitely keep the lid on this inflationary trend.

6. Ecology and Environment

We believe, the drastic increased demands on a fragile-balanced ecology and environment will have unavoidable far-reaching adverse effects for a long-term to permanent duration unless adequate measures are established for mitigation of these impacts.

7. Management Alternatives

All existing and proposed phosphate processing plants are on private lands. The Departments of the Interior and Agriculture have little or no control over plant location or their design and can serve only in an advisory capacity in suggesting viable alternatives. Ultimate control is within the domain of the State and local planning or regulatory authorities. Restriction of lands not now under lease or permits must be made, then inspection and compliance to follow.

The subject leases convey without constraint as to time, location, or rate, the unequivocal right to develop, produce and market the Federal phosphate resource thereon, if all other terms and conditions have been met by the lessee.

Whereas: only open-pit and underground mining are viable methods of mining phosphate deposits in southeastern Idaho under the existing technology and under geological conditions of the area; we must keep in mind phosphate ore below the depth attainable by open-pit mining amounts to many billions of short tons. Underground mining should be considered as an alternative in certain locations. And, because phosphate is an essential constituent of all living matter, there is no substitute material for its use in fertilizer and animal feed. Let us resolve to allow continued mining, but with restrictions applied as precursorly described above in relation to agriculture and its people in Idaho.

Enforcement of compliance becomes the key.

5. The production of elemental phosphorous is used as a step in the production of high purity phosphoric acid and other high purity chemicals for use in foods, and drink for human consumption, for additives to animal feed, and for industrial uses. The phosphate industry has long recognized the gross inefficiency of this procedure, but to date no economically viable alternate procedure has been developed. A process for purification of phosphoric acid produced by the wet process is obviously needed. Research by Industry, by the T.V.A., by U.S. Bureau of Mines, and by Industry in cooperation with the T.V.A. has been going on, and is continuing with this objective, but no viable solution is in sight. Rising costs of electric power and fuel are giving added incentive for this quest.

With the increased electrical demand and associated new generation facilities required, there will an increase in cost that must be carried by all rate payers. Cost of service of each class of customers is the determining factor on the rates for that class of customer. The inflationary trend is caused by all people demanding and paying more for all commodities. With the increase in phosphate activities there will be a greater demand for goods than available supply; therefore, the goods will support a higher price and all buyers have to pay that price.

6. This is so stated in the text.

7. The alternative of underground mining is discussed in the text.

...HARRIS, Governor
...MISSION
...HNSON, Sandpoint
...C. PETTIT, Lewiston
CHRISTIAN, Cascade
JACK HEMINGWAY, Sun Valley
H. JACK ALVORD, Pocatello

IDAHO FISH AND GAME DEPARTMENT

JOSEPH C. GREENLEY
Director

POST OFFICE BOX 25
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September 21, 1976

Dr. V. E. McKlevey, Director
U. S. Geological Survey Bureau
National Center
Reston, VA 22092

Dear Dr. McKlevey:

Our general comments on the draft Environmental Impact Statement entitled, "Development of Phosphate Resources in Southeastern Idaho" are as follows. Specific comments are attached.

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Upon our review of the draft Statement, we were dismayed to find that a considerable amount of editing occurred with the information we supplied to the Interagency Wildlife Task Force. This editing resulted in a profusion of omissions, errors and mis-statements. In several instances, we have been credited with material that was either altered or is in error or obtained from other sources. If this is any indication of how data and information furnished by other agencies and companies were utilized, there is some question in our mind as to the soundness of the document.

We find that the study area included in the Statement, in reality, is too large to adequately describe and relate to in comparison with the major areas that will be impacted. There are no new mines, processing plants or transportation corridors proposed or described in the area north and west of State Highway 34. With the exception of several blocks of lease or prospecting permit applications, the major portion of this area will not receive direct impacts from the proposed action.

Relating the amount of acres of surface disturbance created by extention of existing mines or the creation of new mines to the total acres within the study area has a tendency to dilute the magnitude of the proposed action.

Inasmuch as only a small amount of fish and wildlife data was included in the description of this north portion of the study

1. The area was delineated on the basis of overall regional impacts. The Task Force recognizes that a number of specific impacts such as land disturbance from mining are concentrated and localized in an area, and the impacts are so described. Because of the processing plants in the Pocatello area and the scattered presence of phosphate west of the Montpelier-Soda Springs area, reduction of the size of the study area is not feasible. The impacts on wildlife are primarily in Management Units 66, 66A, 69, and 76, and are so discussed. This, in essence, reduces the area in which the wildlife has been considered. The Task Force believes that adding additional detailed descriptive material for the rest of the area would add nothing significant to the EIS inasmuch as there would be no significant impacts.

1. area, we feel this inadequacy should be corrected either through reducing the size of the study area or including additional descriptive data.

2. We would recommend that another map be included in Volume III that would show the quality relationship of streams found in the study area. A statewide stream classification map was provided the Task Force but no reference to it was made in the Impact Statement. This relationship is important to relate the distribution of "blue ribbon" streams in the area to the proposed mining projects.

3. We were appalled to review Map #8 showing habitat and migration routes of big game and grouse in southeastern Idaho. Although the Department furnished the bulk of the information shown on the map and is credited with such, we find it grossly in error due to changes that have been made. A complete summary of errors and omissions that we detected are included in our detailed comments on the document. We feel the problem should be specifically pointed out, however, as anyone having some knowledge of the wildlife resources in this part of the State is going to question items such as: Deer migration routes being shown as sage grouse migration routes, migration routes where there are none and elk winter ranges that are calving areas. We, therefore, recommend that this map either be corrected or Department credit be removed.

4. Fairly detailed estimates are made in the Statement for some of the wildlife losses but there is no direct mention made of estimated losses of fish life. There are inferences that because a stream is not fished it does not have value. Many streams in the study area are quite small and while they receive little fishing pressure, they serve as spawning and/or brood areas. Fish produced in these streams will contribute significantly to fisheries in larger streams. Even those streams without a fishery contribute to the overall high water quality in the study area.

5. In several instances, it is stated that sediment loads in streams are anticipated to be several times in excess of present-day levels, both during and after operations. It is not specifically stated whether these increased sediment loads will be in violation of present State water quality standards. From information in the Statement, it is apparent that adequate measures will not be taken to maintain the integrity of present water quality levels.

6. The relationship of the fishery in the Blackfoot River system to the Blackfoot Reservoir should be emphasized. Any detrimental effects on the fisheries in the upper Blackfoot River will also degrade the reservoir fishery.

2. The statewide stream classification map is a small-scale map and consequently is highly generalized. Expanding the map to a larger scale would further generalize the information and could be misleading. The overall quality of the streams in the area are described in considerable detail in Part 1, Chapter II, under the heading of fisheries.

3. There were some cartographic errors on map 8. The map has been revised.

4. Data on fish numbers per mile or section of stream and average fish densities per unit of stream, are not available for many streams affected by the proposed mining. Therefore, estimates as to fish losses and impacts to fish populations could only be determined in qualitative terms.

5. Sediment loads described in Part 1, Chapter III are based on projections of current conditions with limited reclamation and sediment control facilities. Proper sediment control, as required, will reduce this loading. Monitoring will be necessary to determine the effectiveness of such controls as designed and the possible need for additional controls.

6. The text has been amplified accordingly.

There are instances in the Statement where potential adverse effects to a stream are described but cover only that portion of the stream within the National Forest. These impacts will carry beyond the forest boundary and should be so documented.

6 Compensation from mining companies in the form of new ponds and reservoirs is primarily tied to compliance with laws and regulations that they have to operate under in order to provide safeguards to protect watercourses.

The potential of a ruptured retaining dam surrounding the holding ponds must be recognized. No secondary retaining dams are planned in those areas where accidental losses would create severe damages to a stream and perhaps a river system. With a series of holding
7 ponds proposed for the processing plant on Diamond Creek and the potential siltation pond being constructed in Stewart Canyon, a tributary to Diamond Creek, the high water quality and related aquatic forms of the stream are in jeopardy. Despite assurances it won't happen, the breaching of retaining dams does occur as attested to the loss of a holding pond at the Beker plant near Conda earlier this year.

82

The sociological impacts on fish and wildlife are lightly addressed in the Statement. The impacts of additional fishing and hunting pressure on the resources and the management direction that would
8 have to be taken to prevent fish and wildlife populations from reaching critically low levels should be emphasized. With more people utilizing these resources, the need for additional law enforcement effort by the State will be needed. An attempt to control the magnitude of this type of impact will mean additional costs to the sportsmen of Idaho.

When addressing the impacts on fish, wildlife and habitat, there is a habitual usage of words that attempt to "soften" the losses. This type of sematic manipulation results in the substitution of words like; "altered" for "destroyed"; "displaced" for "eliminated" or "removed"; "affected" instead of "removed"; "disturbed" instead of "destroyed" and "effects on" rather than "damage to". The terminology used may be partially correct but falls far short of adequately describing the impacts.

9 Another example of downplaying the magnitude of impacts is by stating that they will be negligible unless certain happenings occur. If the potential is there for adverse impacts, it should be directly addressed rather than making inference that the impacts might not occur.

We find the Statement contains a multitude of escape clauses that leave us with the distinct impression there is no guarantee

7. The possible rupture of sediment ponds is so stated on page 1-357 and other places of the DES. The statement has been modified in include retaining dams.

8. The relationship of the fishery in the Blackfoot River system has been amplified in the FES. Detailed sediment analyses were available only for streams within the Caribou National Forest; the impact, however, has been projected beyond the boundaries.

We agree that the construction of new ponds and reservoirs are tied to compliance with regulations requiring protection of waterways.

9. There is no intent to downplay the impacts. We feel that the impacts are clearly and strongly stated. As to mitigation, the Task Force can only guarantee those measures under the authority and jurisdiction of the Federal agencies directly controlling the mining. The Task Force, for example, cannot guarantee that the Idaho Fish and Game Department will do certain things unless that department is willing to make such commitments.

many of the proposals for reducing impacts will be carried out. Sentences containing such clauses as; "to greatest extent possible", "as feasible" and "whenever possible" are common. In many cases, there are no statutory requirements that would force the companies to carry out appropriate measures to minimize damage. It, therefore, becomes a function of the federal agencies involved to stipulate in any permits issued that these measures will be carried out. There is no assurance in the Statement that this will be done.

There appears to be a difference of opinion as to the meaning of
9 mitigation. As indicated by statements in the document, mitigation is interpreted as complying with existing statutes that require certain procedures be followed to minimize environmental damages. It is our opinion that the developing entities, as a matter of course, should do everything possible to avoid adverse impacts during development and operations. We feel that mitigation should involve compensation for unavoidable losses that result from development.

Nowhere in the Statement is there any reference made to meaningful on-site or off-site compensation for unavoidable losses that may occur. Despite reference to the fact that significant losses
83 10 will occur, no mention is made of any compensation measures for wildlife. Is it to be assumed that these losses cannot be compensated for or are they being ignored?

Under present pertinent statutes, most of the alternatives to the proposed action that are presented are not viable. Changes in laws through congressional action would be required for them to become a selected course of action. There is no discussion of impacts for alternative actions.

Of the alternatives proposed, the only one we can support, at this point in time, is Alternative 2 which would defer action until further, more adequate studies are conducted. Should such studies be completed and sufficient information be made available for proper evaluation, Alternative 4 may be acceptable with a
11 modification that would permit the development of leases adjoining present operating mines. Such a modification would provide for the continuation and regulated expansion of existing operations but impairment of the environment would not occur to the same degree as if new mines were opened at new locations.

Along with the presently proposed mines, processing plants and transportation systems, we are concerned over the long-term impacts to fish and wildlife should the applications for prospecting permits, fringe acreages and leases be approved. Once these are granted, under present statutes, there would be little

10. Mitigating measures that will be required are cited in Part 1, Chapter IV. Other mitigating measures that could be adopted are so stated. At this time, the agencies responsible for and having authority to instigate, have not committed themselves. The Task Force does not have authority to make such commitments. It should not be assumed that the losses cannot be compensated for nor that they are being ignored.

11. The Forest Service is bound by an agreement with a Federal judge to protect the wilderness values in the roadless areas. This agreement would force the Forest Service to recommend against issuance of new prospecting permits within those areas. The leases within those areas pre date the agreement with the judge. On those areas, the company has the right to mine already. The question again is only how will the mining proceed.

The "fragmentation" of the description of wildlife impacts is dictated by the guidelines from the Council on Environmental Quality and the basic layout of the EIS. The emphasis was placed upon describing the total impacts of each proposal rather than mixing proposals to get a total description of impacts on one resource.

The proposed beneficiation plant in Diamond Creek is to be sited on private land. The agencies involved in the Task Force have no control over this selection unless they can demonstrate off-site damage to areas falling under their jurisdiction. This type of damage would normally result in civil action in the courts after the damage starts to occur.

A case could always be made for delaying an EIS pending gathering of additional data. The function of an EIS is to explain the impacts of a proposed activity. Part of this process is to identify areas where there are gaps in the existing information. The legal commitments carried in the existing leases make no provision for delaying the actions. The lease holders already have the right to mine on their leases. The question the EIS is addressing is not whether to mine or when to mine on these leases. The question is how will the mining be done, and what measures will be carried out to minimize the conflicts with other values.

that could be done to effectively control a massive expansion of new mines and plants should the demand for phosphate increase.

We are pleased to see the Forest Service is complying with the NEPA process to analyze the designated roadless areas within the study area through land use planning procedures. The importance of these roadless areas as seclusion and escape areas for big game animals must be recognized. If additional expansion of mining and roads becomes a reality, these areas, if left undisturbed, may become critical sanctuaries for wildlife populations.

The Forest Service, as stated in the Impact Statement, is bound by their agreement with a federal judge to protect the wilderness values these roadless areas may have until their future management direction is established. This would mean no support at this time by the Forest Service for expanded mining activities in these roadless areas. A management plan for the Diamond Creek Planning Unit must be selected and approved prior to the expansion of mining operations in these areas. We feel the importance of involved roadless areas for fish and wildlife have not been adequately addressed.

84

From an overall viewpoint, we feel the Impact Statement falls
11 far short in pointing out the impact on fish and wildlife resources. The impacts that are described are dispersed throughout the various segments of the Statement. This fragmentation makes it most difficult to determine from the Statement what the total effects of the proposed action will be. We believe it is imperative that total impacts be clearly stated so that they can receive proper consideration from the general public and the involved decision makers.

It is our firm conviction that the development of new mines, processing plants and transportation systems with their related sociological impacts will result in substantial losses to the fish and wildlife resources in southeastern Idaho.

Our Department is opposed to the construction and operation of any phosphate processing plants within the Blackfoot drainage or any action that will lead to the locating of such plants in the Blackfoot River drainage.

A new development time frame should be established that would permit sufficient time for needed fish and wildlife research studies and data gathering procedures to be initiated and carried out so that pertinent data will be available for use in the planning, decision and development stages of the proposed action.

The draft Environmental Impact Statement should be revised and resubmitted for review and comment. We urge full consideration

11 be given to the preceding and attached specific comments in the redrafting of this document.

The opportunity to comment on this matter is appreciated. The importance of decisions made concerning the proposed action to the fish and wildlife resources of southeastern Idaho cannot be overemphasized. We urge that full consideration be given fish and wildlife and related resources in the making of these decisions.

Sincerely,

DEPARTMENT OF FISH AND GAME

Joseph C. Greenley
Director

STATE OF IDAHO

DEPARTMENT OF FISH AND GAME

SPECIFIC COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT
"DEVELOPMENT OF PHOSPHATE MINING IN SOUTHEASTERN IDAHO"

PART 1. REGIONAL STATEMENT

Chapter II -- DESCRIPTION OF THE EXISTING ENVIRONMENT

A. NATURAL ENVIRONMENT

3. WATER RESOURCES

Page 154, paragraph 1: Information available to us indicates there are no plans to initiate these studies.

6. WILDLIFE

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12. Page 197, paragraph 2, line 7: Delete: ...estimates a the total of approximately 2,500 elk in the...; Insert: ...estimates approximately 2,500 elk winter in the ...

13. Page 197, paragraph 2, line 8: Delete: ...shift from management..; Insert: ...shift between management...

14. Page 197, paragraph 2, line 10: Delete: ...in unit 66 and 66A may spend the summer there and winter in 69...; Insert: ...in units 66 and 66A, spend the summer there and winter in unit 69...

15. Page 197, paragraph 2, line 11: Delete: ...range area they are more accessible to ...; Insert: ...range elk are more readily vulnerable to...

16. Page 197, paragraph 3, line 8: Delete: ...exceeded 2,500 animals...; Insert: ...exceeded 3,000 animals...

17. Page 197, paragraph 3, line 9: Delete: ...about 2,000 elk,...; Insert: ...about 3,000 elk,...

12 through 17. The text has been changed.

18 Page 197, paragraph 3, line 11: Delete: ...animals in the future...

19 Page 197, paragraph 3, line 12: Insert: ...problems. Alterations of elk winter range, summer range, calving areas or migration routes will effectively lower these population estimates.

20 Page 198, paragraph 2, line 4: Delete: ...by steep slopes and southerly or westerly ...

21 Page 198, paragraph 2, lines 5 and 6: Delete: ...Elk winter in the same general area as deer, but range to higher elevations.

22 Page 198, (unnumbered table): Delete: Cow Camp-Junes Creek under Unit 66 and 66-A; Insert: Fall Creek Basin, Black Mountain and Jacknife Creek. Insert: Meadow Creek under Unit 69; Transfer: South Fork Tincup from Units 66 and 66-A and put under Unit 76.

23 Page 198, paragraph 3, line 1: Delete: ...is believed that...; Insert: ...is known that...

24 Page 199, paragraph 2: Delete: Entire paragraph. This is an assumption and no supporting data is available to substantiate it. Insert: New paragraph -- "Elk migration routes in the study area are often complex. Some short routes have been observed, some are being studied but the majority of them are unknown especially details related to specific routes, time of year and vegetative areas utilized. Such information is necessary for preparing meaningful land use plans."

25 Page 199, paragraph 4, lines 4, 5, 6 and 7: Delete: ...Although their distribution has been highly altered in portions of Idaho, and particularly where coniferous timber stands have reinvaded large back-country burned areas as in the north-central part of the state, they are still present throughout southeastern Idaho and...

26 Page 200, paragraph 1, lines 1 and 2: Delete: ...are generally absent only in the more urban and larger cultivated agricultural portions of the study area.

27 Page 200, paragraph 2, line 5: Delete: ...the mid-1960's,...; Insert: ...the late 1950's,...

28 Page 200, paragraph 2, lines 13 and 14: Delete: ...from that containing a ...

18 through 28. The text has been changed accordingly.

29 Page 200, paragraph 2, line 21: Delete: ...area, so that a...; Insert: ...area and a...

30 Page 201, Table 1-20: Insert: 66-A to Unit 66.

31 Page 202, paragraph 1, line 5: Delete: ...and reproduction...

32 Page 202, paragraph 3, line 1: Delete: ...major natural and cultural...

33 Page 202, paragraph 3, line 2: Delete: ...and snow depth...

34 Page 202, paragraph 3, lines 3 and 4: Delete: ...to further lower elevations. Thus, during severe...; Insert: ...to any place other than where they now winter. During severe...

35 Page 202, paragraph 3, lines 5, 6 and 7: Delete: These key areas over a long period of time strongly influence the number of mule deer the larger general area can support.; Insert: These key winter areas are a major limiting factor in determining population levels.

36 Page 203, Table 1-21: Insert: 66-A to Unit 66; Delete: Caribou McCoy, Upper and Cow Camp-Junes Creek; Insert: Tincup Creek; Insert: Under Unit 69 -- Tex Creek and Willow Creek Canyon.

37 Page 204, paragraph 2, lines 6, 7, 8 and 9: Delete: ...even though alternate routes theoretically are available to them. The major mule deer wintering areas are often immediately below or adjacent to their summering areas.

38 Page 204, paragraph 2, line 9: Delete: ...map 7.; Insert: ...map 8.

39 Page 204, paragraph 3: Insert: ...Idaho. Any reduction in habitat will reduce both mule deer and white-tailed deer populations.

40 Page 204, paragraph 4, lines 12 and 13: Delete: ...drainages, and Dry Valley. These moose do not seem to migrate any great distance from summer range to winter range, and often...; Insert: ...drainages, Skyline Ridge, Meadow Creek, Antelope Creek and Dry Valley. Specific moose migrations are not know but they ...

29 through 32. The text has been changed accordingly.

33. The Task Force believes that snow depths are barriers to movement in some locations. The text has not been changed.

34 through 40. The text has been changed accordingly.

41. Page 205, paragraph 1, line 3: Delete: ...major criterion in...; Insert: ...major criteria in...

42. Page 205, paragraph 2, lines 2 and 3: Delete: ...in herds units 66 and 69, and 50 animals in herd unit 76. This, however, is not a complete count of the population.; Insert: ...in units 66 and 69, and 50 animals in unit 76. This, however, is not a complete count of the population as it was taken incidental to elk and deer surveys.

43. Page 205, paragraph 3, lines 3, 4 and 5: Delete: ...low numbers. Small isolated areas that contain berries and other fruits provide desirable black bear food and habitat.; Insert: ...low density.

44. Page 205, paragraph 4, line 2: Delete: ...and number is undetermined. Game management unit 66 is presently...; Insert: ...and numbers are unknown. Game management units 66 and 69 are presently...

45. Page 205, paragraph 4, line 3: Delete: ...hunting of this species, with the rest of the study area having a ...; Insert: ...hunting lion. The rest of the study area has a...

46. Page 205, paragraph 4, lines 4, 5 and 6: Delete: ...fall hunting season. Defense of a given territory by a family group and the available food supply apparently are limiting factors for these animals.; Insert: ...fall and winter hunting season.

47. Page 205, paragraph 5, line 1: Insert: ...antelope, grizzly bear, wolves and...

48. Page 206, paragraph 2, line 5: Delete: .; Insert: ; however, one grizzly bear was killed four miles from Heise in 1973.

49. Page 206, paragraph 3, lines 3 and 4: Delete: ...the hunting pressure they can withstand without depleting the brood stock of these species.; Insert: ...hunting pressure and birds harvested.

50. Page 206, paragraph 3, lines 6, 7 and 8: Delete: ...generally denote the importance of the most prevalent small game species in the general area of concern.; Insert: ...indicate small game hunting activity in the study area.

51. Page 206, paragraph 4, line 6: Insert: ...lands and grass for domestic stock...

41 through 51. The text has been changed accordingly.

52 Page 207, paragraph 1, line 1: Delete: ...purposes are ...; Insert: ...purposes is ...

53 Page 207, paragraph 2, lines 3 and 4: Insert: ..Valley, Paris-Liberty Area, Fall Creek Basin, Commissary Ridge, Caribou Basin...

54 Page 207, (unnumbered table--Sage Grouse Strutting Grounds): Insert: Paris-Liberty to site location in Bear Lake County and Long Valley to site location in Bonneville County.

55 Page 207, paragraph 3, line 3: Delete: ...ground the hen is associated with.

56 Page 208, paragraph 1, lines 2 and 3: Delete: ...This species is associated directly with grass communities where the...; Insert: This species is primarily associated with grass communities mixed with the...

57 Page 208, paragraph 1, line 4: Delete: ..is also present. It...; Insert: . Sharptails...

58 Page 208, paragraph 1, lines 5 and 6: Delete: ...the loss of this habitat by its removal for agricultural purposes and as the remaining grassland areas changed...; Insert: ...loss of habitat by removal for agricultural purposes and as the remaining grasslands changed...

59 Page 208, paragraph 1, lines 12 and 13: Delete: ...tracts to agricultural lands where cereal grains are the predominant crops. Shrub species including chokecherry, elderberry, and...; Insert:... grass rangeland. Shrub species including chokecherry, bitterbrush and ...

60 Page 208, paragraph 1, line 17: Delete: ...map 7...; Insert: ... map 8... (no sharptail ranges are even shown on the Wildlife map #8. Data ommitted and should be included).

61 Page 208, paragraph 1, line 17: Insert: ...The exact location...

62 Page 208, paragraph 1, line 18: Delete: ...is included in...; Insert: ...is combined with...

63 Page 208, paragraph 2, line 4: Delete: ...species often exhibits...

52. The text has not been changed. The grammar is correct as it stands.

53 through 63. The text has been changed accordingly.

64 Page 208, paragraph 2, line 6: Insert: ...slopes and ridges...

65 Page 208, paragraph 2, line 8: Delete: ...and cones...

66 Page 208, paragraph 2, line 9: Delete: Old over-mature Douglas Fir trees that are located on or near...

67 Page 209, paragraph 1, line 1: Delete: ridge tops are usually preferred.

68 Page 209, paragraph 1, line 4: Delete: ...related...; Insert: ...various other...

69 Page 210, paragraph 1, line 1: Delete: ...introduced species...; Insert: ...exotic species...

70 Page 210, paragraph 1, line 4: Delete: ...native brush...; Insert: ...native grass...

71 Page 210, paragraph 2, lines 3 and 4: Delete: ...Because of lack of suitable habitat, it is not an important species relative to the present study.

72 Page 210: Insert: New paragraphs -- "Snowshoe hare inhabit all coniferous-aspen habitat types in the study area. This species is harvested incidental to big game hunting.

White-tailed jackrabbits are found throughout the sagebrush-grass and along the edges of agricultural cover types of the study areas. They are hunted extensively during the winter."

73 Page 211, paragraph 1, line 1: Delete: ...dove is a migratory species and...; Insert: ...dove, a migratory species, is...

74 Page 211, paragraph 1, line 3: Delete: ...community adjacent to agricultural lands.; Insert: ..., mountain brush, riparian and agricultural areas.

75 Page 211, paragraph 3, line 3: Delete: ...areas are on small bodies...; Insert: ...areas adjacent to bodies...

64 & 65. The text has been changed.

66. The statement in the DES is correct. No change has been made.

67. The statement in the DES is correct. No change has been made.

68 & 69. The text has been changed.

70. The statement in the DES is correct. No change has been made.

71. The statement in the DES is correct. No change has been made.

72 through 75. The text has been changed.

76. Page 211, paragraph 3, lines 4 and 5: Delete: Nesting success is high, on some areas such as Grays Lake.; Insert: Waterfowl production is high throughout the study area.

77. Page 212, paragraph 3: Delete: Entire paragraph.

78. Page 213, (1-214), paragraph 2, lines 1, 2 and 3: Delete: These data indicate that the 1974 breeding population was significantly higher in three of the areas over the last year, but still generally below that of the long-term average.

79. Page 213, (1-214), paragraph 3: Delete: Entire paragraph.

80. Page 215, paragraph 1, line 1: Delete: Reservoir, but increased elsewhere.; Insert: Production is apparently increasing elsewhere in the study area.

81. Page 216, paragraph 2, lines 6 and 7: Delete: These birds breed only in the remote tundra areas of northern Canada and Alaska.; Insert: There is no known nesting of whistler swans in the study area.

82. Page 216, paragraph 3, line 2: Delete: ...wildlife constituents of...; Insert: ...wildlife species in...

83. Page 216, paragraph 3, lines 3, 4 and 5: Delete: This continuing interest in and use of this resource on the part of trappers, particularly, also demonstrates that beaver have persisted in the area since historic times.; Insert: Man's first presence in the study area during the early 1800's documented the presence of beaver.

84. Page 216, paragraph 3, line 5: Delete: Remainder of paragraph beginning with "Thus it can be....

85. Page 217, paragraph 1, lines 1, 2 and 3: Delete: described earlier is believed mainly responsible for the continued presence of beaver in the study area. Beaver propagate best where aspen stands persist near water courses over a long period of time. Sample...; Insert: Beaver abundance fluctuates with habitat availability and trapping pressure.

86. Page 217, paragraph 1, line 4: Delete: beaver colony trend counts have been used...; Insert: Beaver colony trend counts are used...

76. The statement in the DES is correct. No change has been made.

77. The text has been changed.

78. The statement in the DES is correct. No change has been made.

79. The statement in the DES is correct. No change has been made.

80 through 86. The text has been changed.

87 Page 217, paragraph 1, line 5: Delete: ...to identify trends in numbers of these animals.; Insert: ...determine population trends and distribution of these animals.

88 Page 217, paragraph 2, line 2: Delete: Slow moving streams...; Insert: Streams such as...

89 Page 217, paragraph 2, line 4: Insert: ...Brockman Creek and associated wetland areas...

90 Page 217, paragraph 2, line 7: Delete: ...beaver dams and permanent...; Insert: ...beaver dams. Permanent...

91 Page 217, paragraph 2, line 10: Insert: ...harvest occurs on all streams...

92 Page 217, paragraph 3, line 6: Delete: They are known to establish a territory ten to...

93 Page 218, paragraph 1, lines 1, 2 and 3: Delete: twenty-five miles in diameter within which they seek their food supply, consisting mainly of small birds and small mammals such as the red squirrel. Mink are also found in the study area.; Insert: Mink are also found in most water areas of the study area.

94 Page 218, paragraph 2, line 4: Delete: ...moles, and...; Insert: ...voles and...

95 Page 218, paragraph 3: A raptor species list should be included. Eagles are also important and should be mentioned in this paragraph. Prairie falcon should not be included in the threatened or endangered segment.

96 Page 218, paragraph 4: Delete: Entire paragraph; Insert: About 100 pairs of golden eagles inhabit the area. They are primarily found throughout the areas where the highest density of their prey species occur. A decimating factor on the golden eagle as with other raptors is when the development of lands reduce their primary prey species and nesting areas.

97 Page 218, paragraph 5, line 4: Delete: ...at least two known...; Insert: ...at least five known...

87 through 94. The text has been changed.

95. The last sentence of the paragraph has been deleted.

96 & 97. The text has been changed.

98 Page 218, paragraph 5, line 5: Delete: ...approximately 100 birds..; Insert: ...approximately 140 birds...

99 Page 219, paragraph 1, lines 2, 3 and 4: Delete: ...Ririe, Idaho, and approximately 50 near the Bear River area. Others are scattered throughout the study site. This is thought to be the largest concentration in this part of the state.; Insert: ...Roberts, Idaho and approximately 50 near the Bear River area. Others are scattered throughout the study area.

100 Page 219, paragraph 2, line 1: Delete: ...turkey vulture...(It is not a bird of prey).

101 Page 219, paragraph 1, line 6: Insert: Turkey vultures, ravens, magpies and crows are also common throughout the study area.

102 Page 219, paragraph 3, lines 8 and 9: Delete: ...competition by man which allows him to dominate more of the landscape...; Insert: ...alteration of habitat by man...

103 Page 219, paragraph 4, lines 3 and 4: Delete: ...reduced in number, and habitat comparable to that in the area is considered scarce.; Insert: ...reduced from historic numbers.

104 Page 219, paragraph 4, line 7: Delete: ...breeding territories along marshy edges.; Insert: ...territories in riparian habitat.

105 Page 220, paragraph 2, lines 3, 4, 5 and 6: Delete· ...the long shorelines and tall emergent vegetation of the region. Grebes, white pelicans, cormorants, great blue herons, coots, willets, avocets, and California gulls are a few common summer residents.; Insert: ...riparian areas.

106 Page 220, paragraph 2, line 7: Delete: ...Franklin's and California gulls,...; Insert: ...Franklin and California gulls, grebes,...

107 Page 220, paragraph 2, lines 8, 9 and 10: Delete: ...and common snipes have found ideal breeding conditions. Franklin's gulls nest in several large colonies in bulrush habitat throughout this region. Franklin's gulls...; Insert: ...Wilson's snipe, Great blue heron, black-crowned night heron, American bittern, coot, willet, American avocet and yellowlegs have also established breeding grounds within the study area. Franklin gulls nest in several large colonies inbullrush habitat throughout this region. Franklin gulls...

98 through 107. The text has been changed.

108 Page 220, paragraph 2, line 12: Delete: ...common snipe,...; Insert: ...Wilson's snipe,...

109 Page 220, paragraph 2, lines 13 and 14: Delete: There is little information concerning the densities distribution of these species in the study area.; Insert: Other shorebirds found in the area include phalarope, stilts, sandpipers, killdeer and plover.

110 Page 220, paragraph 3, lines 1 and 2: Delete: ...great variety of...; Insert: ...all...

111 Page 220, paragraph 3, line 3: Delete: ...has certain birds endemic to...; Insert: ...attracts certain species of birds.

112 Page 220, paragraph 3, lines 4, 5 and 6: Delete: ...it. There are numerous species, however, that occur throughout all of the habitat types. Some of the most common seed eaters are the horned lark, vesper sparrow, and McGowan's longspur.

113 Page 220, paragraph 3, lines 8 and 9: Delete: ...kingbird. Numerous swallows and night hawks are common during the summer period.; Insert: ...kingbird, swallows and night hawks.

114 Page 221, paragraph 2: A species list should be shown.

115 Page 221, paragraph 2, line 2: Delete: ...subject area...; Insert: ...study area...

116 Page 221, paragraph 2, line 5: Delete: ..food.; Insert: ...food by these animals.

117 Page 222, (unnumbered table): The presence of ringtail, pigeon hawk and wood ibis within the study area is doubtful. They should be omitted. The Rocky Mountain wolf has not been recorded in the study area and its presence is questionable.

The present classification of species listed in this table should be updated to conform with the official list. Who's determination was used to place species in the threatened classification? This cannot be considered to be an official classification!

118 Page 223, paragraph 2, line 3: Delete: ...one was sighted...; Insert: the tracks of one were seen...

108 through 113. The text has been changed accordingly.

114. Inasmuch as most of the avian species are not seriously impacted, a complete listing of all species is not believed warranted. A selected listing is presented as representatives of the type of species present.

115 & 116. The text has been changed accordingly.

117. The table has been deleted. Those species officially designated as threatened or endangered are discussed in the subsequent text.

118. The text has been changed accordingly.

119 Page 223, paragraph 2, line 1: Delete: ...endangered species,..; Insert: ...threatened species,...

120 Page 223, paragraph 3, line 5: Delete: ...Interior.; Insert: ...Interior and has since been removed.

121 Page 223, paragraph 3, line 8: Insert: ...is found. Its nests are located in cliff areas.

122 Page 223, paragraph 4, lines 5 and 6: Delete: ...located specifically around Grays Lake and Blackfoot Reservoir.

123 Page 223, paragraph 4, lines 9 and 10: Delete: ...species generally. The use of pesticides has affected its breeding capability adversely.; Insert: ...species. The use of pesticides has adversely affected its breeding capability.

124 Page 224, paragraph 3, line 4: Insert: ...Diamond Creek, Rasmussen Valley, Crane Flat...

119 through 124. The text has been changed accordingly.

7. FISHERIES

125 Page 225, paragraph 2: The word "stress" is used in this paragraph which probably should be either defined or other terminology used to describe the problem.

125. The word stress has been changed to impact.

126 Page 225, paragraph 3: It is not necessarily true that streams modified by beaver activities are producing most of the fishery. Is the fishery being defined as: fisherman days, numbers of fish caught, pounds of fish caught, numbers of fish produced or a combination of these factors.

126. It is defined on the basis of a combination of these factors.

127 Page 225, paragraph 3, line 10: Delete: ...its excellent...

127. The text has been changed accordingly.

128 Page 225: We suggest inclusion of a paragraph such as the following:

"Blackfoot Reservoir, Blackfoot River and tributary streams are a complex environmental entity where factors that affect one can affect the others. For example, mature rainbow and cutthroat from Blackfoot Reservoir ascend Blackfoot River in May and June to spawn. Rainbow spawn primarily in the Blackfoot River below the Lower Narrows. Cutthroat ascend the main river and spawn in virtually all of the main tributary streams. The eggs are deposited in the stream gravel and hatch approximately 60 days after fertilization. The young fry gradually emerge from the gravel and find protective cover and food in the immediate area of their emergence. They rear in these tributary

128. This has been added to the text.

Page 225, continued: streams for one to three years and then migrate down the Blackfoot River and into Blackfoot Reservoir. They continue their growth in Blackfoot Reservoir for two to four years when they reach maturity and ascend these tributary streams to spawn. Other trout live and complete their entire life cycle in the stream of their origin.

Any addition of silt, reduction in rearing habitat or passage problems in a particular stream, although it may be small, has the potential to reduce the fish populations in that particular tributary stream, the Blackfoot River and Blackfoot Reservoir. Therefore, any reduction in fish populations in a specific area can affect the entire Blackfoot system."

128 Page 225 - Varieties of Cutthroat Trout: The Snake River upstream from Shoshone Falls contains two forms of native cutthroat trout. One form, called the large-spotted Snake River cutthroat trout, was at one time uniformly distributed over the entire Snake River Plain from Shoshone Falls upstream to the headwaters of the Snake River near Yellowstone National Park. Today, its range has been somewhat restricted. This trout is distinguished by the presence of large roundish spots concentrated mainly behind the region of the dorsal fin. This fish is present in the Blackfoot River system and virtually all native fish found there are of this origin. The Henrys Lake origin cutthroat trout mentioned in the draft is this large-spotted Snake River cutthroat trout.

97

Another form, called the Snake River fine-spotted cutthroat trout, occurs in the South Fork of the Snake River and its tributaries from Jackson Lake downstream. This fish is also common in the phosphate mining unit and occurs in virtually all tributaries of the Salt River or the South Fork of the Snake River in Idaho. This fine-spotted Snake River cutthroat is propagated by the Wyoming Fish and Game Department and in the past few years plants of this form have been made in Blackfoot Reservoir, Salt River and the South Fork of the Snake River tributaries.

The two mentioned forms of cutthroat trout are the only ones found in the phosphate mining unit. Their distinction is readily apparent upon examination.

129 Page 226, paragraph 3, line 1: Delete: ...stream cutthroat-trout fisheries...; Insert: ...cutthroat trout populations...

130 Page 226, paragraph 3, line 7: Delete: ...Bear Lake Canal, Bloomington Creek, Co-op Creek...

131 Page 226, paragraph 3, line 8: Delete: ...Paris Creek...

129 through 131. The text has been changed accordingly.

132 Page 227, paragraph 1, line 5: Delete: ...with cutthroat trout fisheries...; Insert: ...containing cutthroat trout populations...

133 Page 227, paragraph 1, line 9: Delete: ...Little Blackfoot River,

134 Page 227, paragraph 1, line 13: Delete: ...Reservoir, Wolverine Creek supports a low value fishery.; Insert: ...Reservoir and Wolverine Creek.

135 Page 227, paragraph 2, lines 10 and 11: Delete: ...species of cutthroat trout is a much sought after trout and specimens of ten pounds or over are not uncommon.; Insert: ...cutthroat trout reach large size and support a heavily utilized fishery.

136 Page 228, paragraph 4: No mention is made of the Department of Fish and Game's Stream Classification system and the ratings that are given to streams in the study area. Such a system would provide comparisons with other streams in the State. Is the fishing rating system referred to used elsewhere in the State? Confusion exists in using the same numerical factors for stream fishing and environmental influences.

137 Page 228, paragraph 5: Some confusion is created by the reference to different varieties of cutthroat trout. A table should be included showing genetic names and native waters.

138 Page 228, paragraph 5, lines 4, 5 and 6: Delete: ... However, the Snake River and Utah varieties of native cutthroat trout have been replaced in many environments by the Henrys Lake cutthroat because of hatchery stocking programs.; Insert: ... Fine-spotted cutthroat are also used in hatchery stocking programs.

139 Page 229, Table 1-22: Many streams in the study area are omitted from the list, especially major tributaries to the South Fork of the Snake River. They should be included.

140 Page 233: Fishery ratings should also take into consideration temperature, flow and other values.

141 Page 234, paragraph 1, lines 1 and 2: Delete: Rainbow trout have extended their historic range throughout the study area via hatchery stocking.; Insert: Hatchery stocking has extended the rainbow trout historic range throughout the study area.

132 through 135. The text has been changed accordingly.

136. Inasmuch as impacts are limited to southeast Idaho, it is not necessary to compare the streams with those in other parts of the state. The rating system applies to the streams in southeast Idaho.

137. The Task Force believes that the general description of the varieties of trout is sufficient for the EIS.

138. The text has been changed accordingly.

139. Table 1-22 lists all streams in the area that could be affected by proposed actions. A lengthy addition of other streams not affected would serve no useful purpose.

140. Data on temperature and flow would be useful in evaluating stream conditions; such data, however, are very sparse and sporadic. As such, they cannot be used for direct comparisons.

141. The text has been changed accordingly.

142 Page 234, paragraph 1, lines 3, 4 and 5: Delete: Even with hatchery supplementation, rainbow trout occur in only about one-fifth of these streams. Lake trout are found only in small numbers in...; Insert: Rainbow trout occur in only one-fifth of these streams. Lake trout are found only in...

143 Page 234, paragraph 1, lines 6 and 7: Delete: ..are restricted mainly to the Salt River drainage. They occur in about 12 percent of the streams.; Insert: ...are found in the Salt River drainage, Meadow Creek, South Fork of the Snake River, Montpelier Creek and Grays Lake Outlet.

144 Page 234, paragraph 1, line 10: Delete: ...have probably...; Insert: ...trout may have had...

145 Page 234, paragraph 1, line 11: Delete: ...other species or...;

146 Page 234, paragraph 1, line 12: Delete: ...have expanded their range to include...; Insert: ...are found in...

147 Page 234, paragraph 3, line 2: Delete: December and January as they approach the shore to spawn.; Insert: January as they spawn along the shore.

142 through 147. The text has been changed accordingly.

B. CULTURAL ENVIRONMENT

4. RECREATION RESOURCES

148 Page 311, paragraph 4: Does this mean that it is necessary to have more boat docks, outhouses, concession stands, etc., in order to enjoy or enhance water based recreation resources?

148. No; the statement should not be so construed. While such facilities do inhance outdoor recreation opportunities for some, they are not necessary for all.

149 Page 314, Table 1-33: This table does not include all of the major reservoirs and lakes in southeastern Idaho. Why isn't Bear Lake and the impoundments in Franklin County also included? As long as this table includes bodies of water outside of the study area, these lakes and reservoirs should be included.

149. Additional major lakes and reservoirs have been added to the table.

Chapter III -- ENVIRONMENTAL IMPACTS

A. NATURAL ENVIRONMENT

1. LAND RESOURCES

150. Page 339, paragraph 3: It is assumptive to consider that the lake that may be created in the pit on Diamond Creek will provide recreational opportunities. Water quality data will have to be acquired first.

150. We concur.

2. WATER RESOURCES

151. Page 344, paragraph 3, line 11: Water quality of surface waters would also be affected by structural failures.

151. We concur.

152. Page 345, paragraph 2: Are any precautions proposed to prevent the deterioration of water quality as a result of slurry line rupture?

152. Such precautions will have to be developed on a case-by-case basis when exact location and engineering designs are available.

153. Page 351, paragraph 2, line 1: Delete: ...bankfill stage...; Insert: ...flood stage...

153. The reference to bankfull stage is correct.

100

154. Page 351, paragraph 3: It is difficult to comprehend that a "clean" stream would be no worse than a natural "dirty" stream if suspended sediment concentrations were increased 10 fold! What constitutes a "clean stream" or a "dirty stream?" At what point does a stream become "dirty?" This paragraph should be deleted or reworded.

154. We find no problem with this paragraph. It merely provides some general perspective on the problem.

155. Page 352, paragraph 2: This paragraph infers that if you have enough water to carry suspended sediments then, overall, the concentration would be within natural or acceptable limits. This is a ridiculous assumption to make. Apparently, no consideration is given to where these increased suspended sediments will be deposited nor what their effects will be on aquatic organisms. Certainly stream segments above diversion structures and Blackfoot Reservoir will be affected.

155. This inference is not intended.

156. Page 352, paragraph 4: Are the 53 miles of stream channels impacted on U. S. Forest Service lands or does this include all streams plus Blackfoot Reservoir?

156. This includes all streams impacted by the nine mines.

157. Page 353, paragraph 1: Although little is mentioned of the Lanes Creek Mine in this statement, its location on private lands is adjacent to the main channel of the creek some 10 miles above its confluence with Diamond Creek. How can it be predicted that the

157. The initial reference to Lanes Creek has been deleted.

158. Page 353, paragraph 1, continued: impacts will be negligible on this stream in comparison to others? As noted in paragraph 4 on this page, "Data for the Wooley Valley and Lanes Creek mines are not available." Without such data, how can predictions be made?

159. Page 353, paragraph 5: Why should increased sediment loads continue to exist in Diamond Creek at 1 1/2 to 3 times existing conditions following the conclusion of mining operations? Doesn't this mean a continued degradation of waters in the Blackfoot River system?

160. Page 354, paragraph 3: What about stream segments such as Angus Creek outside of the National Forest boundary? Is all of the prediction data on water quality related only to that within the National Forest? If so, why wasn't data included for streams or portions of streams outside the U. S. Forest Service boundaries?

161. Page 355, paragraph 2: Again, we are concerned with continuing sediment load increases that will continue following mining. At what level will these conditions be in violation of state water quality standards?

162. Page 356, paragraph 3: With the low stream flow of Johnson Creek, wouldn't any increase in sediment loads, whether during or after mining operations, be greater than "insignificant?" Does this include portions of the stream outside of U. S. Forest Service boundaries?

163. Page 360, paragraph 3, line 3: Delete: ...of sediment.; Insert: ...of nutrients.

5. WILDLIFE

164. Page 373, paragraph 6, line 3: Delete: ...Management Areas...; Insert: ...Management Units...

165. Page 374, paragraph 1, lines 2, 3 and 4: Delete: ..of the emigrants will be dependent upon their ability to adapt and the ability of the adjacent range to support the increase in numbers.; Insert: ...of displaced animals will be dependent upon their ability to adapt and the carrying capacity of ranges to which they move.

166. Page 374, paragraph 2, lines 1, 2 and 3: Delete: ...be affected by disrupting major calving areas. The total impacts as far as numbers and time periods for relocation and possible adaptation is unknown.; Insert: ...be adversely affected by disrupting calving areas. The total adverse impacts are unknown.

158. This is based upon extrapolation of data from other sites.

159. Sediment will likely continue after mining for a long time from dumps until revegetation is fully developed. The sediment could reach the Blackfoot Reservoir.

160. The 53 miles of streams impacted by nine mines include those outside the Nation Forest boundary.

161. Until vegetation cover of dumps is fully developed, sediment can be expected. Until measurements of sediment production are made, and the effectiveness of settling ponds and other mitigating measures determined, it is not possible to determine whether State water quality standards will be violated. It is intended that mitigation will preclude such violation.

162. Inasmuch as existing loads and projected loads are both low, the impact is expected to be insignificant despite the flow.

163 through 166. The text has ben changed accordingly.

167 Page 374, paragraph 4, line 2: Insert: ...Elk, deer, moose...

168 Page 374, paragraph 4, line 3: Delete: ...most sensitive...; Insert: ...very sensitive...

169 Page 374, paragraph 4, lines 4 and 5: Delete: ...response to increase human activity and overall population increase.; Insert: ...because of increased human activity.

167 through 169. The text has been changed accordingly.

170 Page 374, paragraph 4, line 7: Delete: 76, including calving grounds, feeding areas, migration routes and important cover for security and wintering areas.; Insert: 76.

170. We believe the text is correct as it stands.

171 Page 374, paragraph 4, lines 8, 9 and 10: These sentences are confusing. Recommend it be deleted or rewritten for better comprehension.

172 Page 374, paragraph 4, lines 12 and 13: Recommend that this entire sentence, including that portion on page 375, be deleted or rewritten.

102

173 Page 375, paragraph 2, line 1: Delete: Hunting success for elk and moose indicates...; Insert: The majority of ...

171 through 180. The text has been changed accordingly.

174 Page 375, paragraph 2, line 2: Delete: ...for Herd Unit...; Insert: ...in Unit...

175 Page 375, paragraph 2, line 3: Delete: The elk permits and 18...; Insert: The 600 elk permits and 32...

176 Page 375, paragraph 2, line 4: Delete: the Southeast...

177 Page 375, paragraph 2, line 5: Insert: ...human population...

178 Page 375, paragraph 2, line 6: Delete: ...acres in Herd Unit 76.; Insert: ...in the unit.

179 Page 375, paragraph 3, line 4: Insert: ...increased human...

180 Page 375, paragraph 3, line 6: Insert: ...of any ...

181 Page 375, paragraph 3, line 7: Delete: ...will be...; Insert: ...have...

182 Page 376, paragraph 1, lines 4 and 5: Delete: ...habitat of which human disturbance, roadkills, and increased poaching will be major factors.; Insert: ...areas.

183 Page 376, paragraph 2, line 2: Delete: ...displaced.; Insert: ...eliminated.

184 Page 376, paragraph 2, lines 3 - 10: Delete: ...result in the birds failing to winter over, to return to historic strutting grounds, and to nest or raise young. Again, the cumulative effect is significant. For example, if winter range is altered for 300 sage grouse, (a conservative estimate) half--150 hens--would be effected. Based upon the average young per hen of 4.4 in the study area, the total annual impact will be loss of 660 off-spring available for hunting and recruitment into the existing populations.; Insert: ...will eliminate the population dependent upon that area.

185 Page 376, paragraph 3, lines 1 - 5: Delete: The Columbian sharptailed grouse was classified "status undetermined" by the U. S. Fish and Wildlife Service indicating that it was in serious trouble. Therefore, the alteration of any additional habitat in the study area could result in the populations within the study area becoming endangered.

186 Page 376, paragraph 4, line 4: Delete: ...such popular...; Insert: ...such important...

187 Page 377, paragraph 1, line 1: Delete: ...hunting...

188 Page 377, paragraph 2, line 5: Where are there 12 areas of excellent and good mourning dove habitat?

189 Page 377, paragraph 2, line 9: Delete: ...could be calculated. The major chukar...; Insert: ...can be calculated. The chukar...

190 Page 377, paragraph 2, lines 10 and 11: Delete: ...population in the study area is located on and adjacent to Dingle Ridge. There are no current mining plans for the area.; Insert:...population is located in an area adjacent to Dingle Ridge where no current mining plans are proposed.

181. The text has been changed accordingly.

182. We believe the text is correct as stated.

183 through 187. The text has been changed accordingly.

188. The areas are sagebrush-grass habitat adjacent to agricultural lands, mostly in the Bloomington, Dry Creek, Dry Valley, and Woodall Marsh areas and areas near the Blackfoot Reservoir.

189 & 190. The text has been changed accordingly.

191 Page 377, paragraph 3, lines 2, 3 and 4: Delete: ...directly because of loss of habitat and indirectly by increased huhting pressure made available by road construction into areas where few and/or poorly developed roads occur presently.; Insert: ...because of loss of habitat and by increased hunting pressure.

191. We believe the text is correct as it stands.

192 Page 377, paragraph 4, lines 3 and 4: Delete: ...be displaced...; Insert: ...will be eliminated.

193 Page 378, paragraph 1, lines 1 - 3: Delete: ..., but the magnitude should affect less than 25 percent of the squirrel populations in the project area.

194 Page 378, paragraph 2, line 3: Delete: Onsite impacts are...; Insert: The destruction of...

195 Page 378, paragraph 2, line 8: Insert: ...and destruction of...

196 Page 378, paragraph 3, line 6: Insert: ..impacts for waterfowl,...

192 through 196. The text has been changed accordingly.

197 Page 378, paragraph 3, line 8: Insert: areas.; Delete: ., where over a million ducks migrate each year.

197. We believe the text as written is appropriate.

198 Page 378, paragraph 4: Delete: Entire paragraph.

198. We believe the text as written is appropriate.

199 Page 379, paragraph 1, line 2: Delete: Offsite adverse impacts...; Insert: Impacts...

200 Page 379, paragraph 1, line 4: Delete: ...similarly affected.; Insert: ...adversely affected.

201 Page 379, paragraph 2, line 1: Delete: ...will be disrupted.; Insert: ...will be displaced and/or eliminated from some areas.

202 Page 379, paragraph 2, line 2: Delete: ...greater on beaver due to the restricted environment of the; Insert: ...greatest on beaver due to the restricted environment of...

203 Page 379, paragraph 2, line 3: Delete: ...beaver. Impacts to beaver will mainly occur through loss of habitat.; Insert: ... this animal and will mainly occur through the loss of habitat.

199 through 203. The text has been changed accordingly.

204 Page 379, paragraph 2, line 8: Delete: affected due...; Insert: reduced due...

205 Page 380, paragraph 1, line 1: Delete: ...pigeon hawks, and burrowing owls will also be affected.; Insert: burrowing owls will also be reduced in numbers.

206 Page 380, paragraph 2, line 4: Delete: ...altered throughout...; Insert: ...destroyed or disrupted throughout...

207 Page 380, paragraph 2, lines 5 and 6: Delete: Other such areas could be affected. Offsite impacts pose the greatest threat to the total crane population.

208 Page 380, paragraph 2, line 7: Delete: ...could become...; Insert: ...could be drastically reduced...

209 Page 380, paragraph 2, line 8: Delete: ...threatened or endangered...

210 Page 380, paragraph 3, line 8: Delete: ...wherever riparian...; Insert: ...wherever various...

211 Page 381, paragraph 2, line 5: Insert: The peregrine falcon...

212 Page 381, paragraph 2, line 8: Insert: ...some mining activity...

213 Page 382, paragraph 1, line 1: Insert: ...Diamond Creek, Rasmussen Valley,...

214 Page 382, paragraph 1, line 2: Insert: ...remaining undisturbed...

215 Page 382, paragraph 1, line 3: Insert: ...National Wildlife...

6. FISHERIES

216 Page 382, paragraph 3, line 1: Delete: ...most aquatic...; Insert: ...all aquatic.

217 Page 382, paragraph 3, line 7: Delete: ...will probably be...

204 & 205. The text has been changed accordingly.

206. The Task Force believes the wording is accurate.

207 through 217. The text has been changed accordingly.

218 Page 382, paragraph 4, line 1: Delete: ...may directly...; Insert: ...will directly...

219 Page 382, paragraph 4, line 6: Delete: ...sites, may cause...; Insert: ...sites, will cause...

220 Page 382, -- Effects of Silt on Fish: We feel that a better explanation should be given on the effects of silt on fish populations. A paragraph such as the following could be included:

"Increased silt in a stream can have both direct and indirect effects on the fish populations present. High concentrations of silt inhibit the uptake of oxygen through the gills of fish and can have an abrasive effect on them. In addition, high concentrations of silt in the gravel can inhibit the exchange of water and oxygen to the eggs, not carry away the metabolic waste and cause mortality. Mortalities can be extremely high depending upon the amount of water circulating through the redds where developing eggs are located. Increased silt in a stream can reduce the numbers of fish food organisms by smothering them or reducing the availability of their habitat. This can have the same effect on aquatic plants which would in turn reduce the aquatic organisms and possibly fish populations. Increed amounts of silt deposited in a stream can reduce the capabilities of that stream to rear fish. All factors mentioned can work alone or in combination with others with the net effect being a reduced fish population. Hence, any additional silt which enters a stream can be detrimental and have long-term effects on the fish populations."

221 Page 383, -- More People Catch More Fish: With the increased population in the area due to mining, we can expect increased numbers of anglers. These increased numbers will put additional pressure on the fish populations in the drainage. Without severe reductions in the catch, it may be impossible to hold the native fish populations at their present numbers.

222 Page 383, paragraph 1, line 8: Delete: ...could impact...; Insert: ...will impact...

223 Page 383, paragraph 2, line 1: Delete: ...mining and processing operations killed...; Insert: ...mining and mining processing operations and stream channel alterations eliminated most of the trout...

224 Page 383, paragraph 2, line 6: Delete: ...fishery, and improved...; Insert: ...fishery below the mine site.

225 Page 383, paragraph 2, line 7: Delete: ...transportation facilities might hasten this result.

218 & 219. The text has been changed accordingly.

220. The paragraph has been added to the text.

221. The paragraph has been added to the text.

222 through 225. The text has been changed accordingly.

226 Page 383, paragraph 3, line 8: Delete: ...support a trout...

227 Page 383, paragraph 3, line 10: Delete: ...a fishery.; Insert: ...a salmonid population.

228 Page 384, paragraph 2: What does "stress" constitute. What does the last sentence mean?

229 Page 384, paragraph 3, line 1: It states here that, "Lanes Creek will receive high stress from mining" but on page 351, paragraph 1, it states, "The smallest predicted impacts are for Lanes Creek..." One of the statements has to be in error!

230 Page 384, paragraph 3: Somewhere in the paragraph the following statement should be included: "The potential exists, to eliminate one of the most important trout fisheries in southeast Idaho. Mining effects in Diamond and Lanes creeks could detrimentally affect fish populations in the Blackfoot River and reservoir.

231 Page 384, paragraph 3, lines 4 and 5: Delete: ...good-quality streams, which support a good cutthroat-trout fishery as well as other...; Insert: ...high quality streams, which support an excellent cutthroat trout population as well as nongame...

232 Page 384, paragraph 3, line 17: Delete: ...Narrows fishery during construction.: Insert: ...River, tributaries and reservoir fishery for an indefinate period during construction.

233 Page 384, paragraph 3, line 20: Delete: ...as long as 80 or 90 years.; Insert: ...at least 90 years or more.

234 Page 384a, paragraph 2, line 1: Delete: ...will probably be...

235 Page 384a, paragraph 6, lines 2 and 3: Delete: ...Blackfoot River, which is stocked with rainbow trout.; Insert:...Blackfoot River.

236 Page 385, paragraph 1, line 1: Delete: ...could result...; Insert: ...would result...

237 Page 385, paragraph 4, lines 3 and 4: Delete: ...cumulative effect is expected to be moderate.; Insert: ...additional effect could be moderate; however, the accumulative effect could be disastrous to the trout populations in the entire system.

226 through 228. The text has been changed accordingly.

229. The text has been corrected for consistency.

230. We believe the probability of eliminating the fishery to be so low as not to warrant the statement.

231 through 237. The text has been changed accordingly.

238 Page 385, -- Unique Fish Populations in Bear Lake: Although, at this time, they are not considered threatened and endangered, Bear Lake contains populations of some unique species of fish. This is the only lake where these species naturally occur. They include the following: the Bear Lake whitefish, Bonneville cisco, Bonneville whitefish and the Bear Lake sculpin.

238. The statement has been added to the text.

B. CULTURAL ENVIRONMENT

4. RECREATION RESOURCES

239 Page 413, paragraph 4: Do these ratings for hunting and fishing apply only to National Forest lands? Do they cover only the areas around the mines or the entire study area? Recreational impacts will be felt throughout the study area and should be accounted for!

239. These apply to the Caribou National Forest. The overall discussion applies to the entire study area.

240 Page 414, paragraph 3: If outdoor recreation activities are going to be transferred to other areas, where are these areas and what will be the impact on those areas? Some are already at or near capacity!

240. Many of the activities will be transferred to nearby areas, as stated in the text.

241 Page 414, paragraph 4, line 2: Insert: ...precautions are not...

241. The text has been amended accordingly.

242 Page 414, paragraph 4, line 3: It is doubtful that detrimental effects to the environment as is related to the fishery will be of short-term duration. Detrimental effects to wild fish will be long-term!

242. The reference to short-term duration has been deleted.

243 Page 414, paragraph 4, line 5: Delete: ...activities will occur...; Insert:...activities may occur...

243. The text has been changed to reflect this.

244 Page 414, paragraph 5: Degradation of water quality will have more adverse effects on water oriented outdoor recreation than increased populations.

244. The impact of lowered water quality has been added to the FES.

245 Page 415, paragraph 1, line 2: Delete: ...unless adequate...; Insert: ...even though...

245. The Task Force believes the statement as written is correct.

Chapter IV -- MITIGATING MEASURES

B. NATURAL RESOURCES

2. WATER RESOURCES

246 Page 426, paragraph 5, line 1: A monitoring program should not be considered as mitigation. If problems occur that are detected through a monitoring system, it may be too late to prevent aquatic losses.

246. A monitoring system can be considered a mitigating measure in that it can provide early warning of impacts which can lead to early implementation of corrective measures.

5. WILDLIFE

247 Page 436: No stipulations are mentioned in this section as to where funding will come from to provide for mitigating losses. Whose responsibility is it--the sportsmen of the State, the mining companies or the Federal government that gives the final approval?

247. The Task Force believes that the Federal government, the mining companies, and the State government will all cooperate in mitigation of these impacts, however, the Task Force does not have authority to commit funding from these various groups for mitigating measures.

6. FISHERIES

248 Page 437, paragraph 7, line 2: Insert: ...(1973), Stream Alteration Law.

248. Reference to the Stream Alteration law has been added.

Chapter V -- ADVERSE EFFECTS THAT CANNOT BE AVOIDED

A. NATURAL ENVIRONMENT

2. WATER RESOURCES

249 Page 461, paragraph 2: Angus Creek and Bloomington Creek should be listed under high potential unavoidable impacts rather than moderate. Blackfoot Reservoir should be listed under moderate.

249. Hydrologists on the Task Force who made the analyses believe that these are correct as listed.

250 Page 464, paragraph 4, line 9: Insert at the end of the sentence; "resulting in lower dissolved oxygen and possible fish kills."

250. The statement has been added to the text.

Chapter VI -- SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY OF THE AREA

E. WILDLIFE - FISHERIES

251 Page 485, paragraph 2, line 8: More of the river than just the Blackfoot Narrows will drop in long-term loss of productivity.

251. This is so stated in the last sentence of the paragraph.

252 Page 485, paragraph 2, line 8, continued: Other waters should include Blackfoot River and Blackfoot Reservoir.

253 Page 485, paragraph 2, line 9: Insert at end of sentence: "with possibilities of complete elimination of some fish populations."

C. RECREATIONAL RESOURCES

254 Page 486, paragraph 1: Why is only National Forest lands being included in this section? Resources outside of U. S. Forest Service lands and within the study area may equal if not exceed these figures.

Chapter VII -- IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

D. WILDLIFE - FISHERIES

255 Page 492, paragraph 3, line 3: Delete: ...fisheries damages.; Insert: ...damages to the fish populations.

256 Page 492, paragraph 3, line 4: Delete: ...reduce fisheries.; Insert: ...reduce fish populations in reservoirs.

A paragraph should be included in this section relating to estimated fish population losses similar to the estimated wildlife losses shown on page 491, paragraph 3.

257 Page 493, paragraph 5, line 3: Delete: ...fisheries will...; Insert: ...fish populations will...

Chapter IX -- CONSULTATION AND COORDINATION WITH OTHERS

A considerable amount of assistance and data was provided by this Department to the Interagency Task Force. As noted by the multitude of comments we are submitting, much of the material was apparently edited resulting in statements that are inadequate and could be misinterpreted. Some data was completely ignored. We are extremely disappointed in reviewing the results of this effort.

252. See response to comment 251.

253. The complete elimination of fish populations is very remote. We believe the statement as written is sufficient.

254. The statement has been broadened to include all lands in the area.

255 through 257. The text has been changed accordingly.

PART 2. PENDING APPLICATIONS FOR PROSPECTING PERMITS, LEASES, FRINGE ACREAGES, AND TWENTY-YEAR READJUSTMENTS OF LEASES

Chapter II -- DESCRIPTION OF THE EXISTING ENVIRONMENT

A. CHESTERFIELD AND RESERVOIR MOUNTAIN PERMIT AREAS: EAST FORT HALL LEASE AREA

258 Page 2-21, paragraph 1, lines 1 and 2: Sharptailedgrouse and beaver should be added to the list on lines 1 and 2.

259 Page 2-21, paragraph 1, line 8: Delete: ...are low quality...; Insert: ...contains low fish populations...

260 Page 2-21, paragraph 1: Mention should be made of adjoining reservoirs: Chesterfield and Twenty-four Mile (both are misnamed on the map) and Blackfoot Reservoir.

B. WOOLEY AND GRAYS RANGES PERMIT AREAS: PELICAN AND WILSON RIDGES AND HENRY NORTH CONTINUATION LEASE AREAS

261 Page 2-26, paragraph 2, line 1: Insert: ...important summer and winter...

262 Page 2-26, paragraph 2, line 2: Delete: Major elk...; Insert: Seasonal elk...

263 Page 2-26, paragraph 2, line 5: Delete: ...and several black bears.; Insert: ...several black bear and occasional mountain lion.

264 Page 2-26, paragraph 2, line 8: Delete: ...and potential whooping...; Insert: ...and a potential for whooping...

265 Page 2-26, paragraph 2, lines 10 - 13: Delete: ...support excellent fisheries with high fish standing crops. Lanes Creek provides excellent spawning and rearing areas for migrating cutthroat trout from the Blackfoot system. Likewise, Angus Creek is rated very good, although its headwaters have...; Insert: support excellent fish populations and receive high fishing pressure. Lanes Creek and tributaries provides excellent spawning and rearing areas for migrating cutthroat trout from the Blackfoot River and Reservoir system. Likewise, Angus Creek is rated excellent, although its headwaters have somewhat...

258 & 259. The text has been changed accordingly.

260. Inasmuch as the reservoirs are outside of the area, the Task Force does not feel it necessary to include them.

261 through 265. The text has been changed accordingly.

266 Page 2-26, paragraph 2, line 17: Delete: ...whitefish...

267 Page 2-27, paragraph 3, line 1: Delete: ...hunting, snowmobiling,...; Insert: ...hunting, fishing, sightseeing, snowmobiling,...

C. ASPEN RANGE PERMIT AREA

268 Page 2-31, paragraph 1, line 6: Delete: ...Elk migration routes cross the southwest part.; Insert: Deer and elk migration routes cross the area.

D. SCHMID RIDGE PERMIT AREA AND DAIRY SYNCLINE LEASE AREA

269 Page 2-35, paragraph 2, line 3: Delete: ...Deer and sage grouse...; Insert: ...Deer, elk and sage grouse...

270 Page 2-35, paragraph 2, lines 4 and 5: Delete: ..., and elk winter just outside the southern boundary.; Insert: ... Beaver are found throughout the major streams and tributaries.

271 Page 2-35, paragraph 2, line 6: Delete: .. Elk migration...; Insert: .. Deer and elk migration...

272 Page 2-35, paragraph 2, line 7: Delete: ...may cross the north end.; Insert: ...do cross the entire area.

273 Page 2-35, paragraph 3, line 1: Delete: ...hunting and...; Insert: ...hunting, fishing and...

E. DRY RIDGE PERMIT AREA AND NORTH DRY RIDGE LEASE AREA

274 Page 2-30, paragraph 3, line 6: Delete: ...cross it. Diamond Creek has a...; Insert: ...cross it. Excellent beaver habitat is found throughout the drainages. Diamond Creek and tributaries have a...

266 through 274. The text has been changed accordingly.

275 Page 2-40, paragraph 3, lines 7 and 8: Delete: ...white fish, and sculpin, and is an important stream...; Insert: ...sucker, dace and sculpin and are important streams.

276 Page 2-41, paragraph 2, line 1: Delete: ...hunting, and...; Insert: ...hunting, fishing and...

277 Page 2-41, paragraph 4, line 4: We feel that Dry Ridge should also be rated as distinctive along with the Blackfoot Narrows.

F. WEBSTER RANGE NORTH PERMIT AREA

278 Page 2-44, paragraph 4, lines 4 and 5: Delete: ...in the north end of the area, and winter range for elk in the southern part. Deer and elk migration routes cross the area. Diamond Creek...; Insert: ...throughout the area. Deer and elk migration routes cross the area. Diamond Creek and tributaries...

279 Page 2-44, paragraph 4, line 7: Insert: New sentence; "A fish hatchery located in Idaho but owned and operated by the Wyoming Game and Fish Department is located at the mouth of Webster Creek."

G. WEBSTER RANGE SOUTH PERMIT AREA AND CROW CREEK LEASE AREA

280 Page 2-48 and 2-49: This is the only area where beaver habitat and beaver populations are recognized. Since southeast Idaho is one of the more important beaver areas in the State, more emphasis should have been placed on this animal. Although other areas in this part of this Environmental Impact Statement are also important for beaver, they have not been mentioned.

H. MONTPELIER CANYON PERMIT AREA

281 Page 2-51, paragraph 7: There is no mention of beaver in this paragraph.

I. OVID-BLOOMINGTON PERMIT AREA

282 Page 2-55, paragraph 4: The importance of this area as deer winter range should be mentioned. Bloomington Creek has not already been degraded by mining.

275 through 280. The text has been changed accordingly.

281. The Task Force has no data to indicate beaver activity.

282. Reference to winter range has been added to the text. The reference to past impact from mining has been deleted.

283 Page 2-55, paragraph 7: Delete: ...hunting,...: Insert: ...hunting, fishing and trapping...

283. The text has been changed accordingly.

Chapter III -- ENVIRONMENTAL IMPACTS

284 Page 2-56, paragraph 1, line 4: Impacts of road construction and clearing will be more than temporary.

284. Roads are generally no more than wheel ruts. Both roads and cleared areas soon revegetate.

Chapter IV -- MITIGATING MEASURES

Most mitigation measures included in this part are related to compliance of existing laws and regulations.

Depending upon location and construction, conveyor systems could result in effective movement blocks for wildlife and should not be considered as mitigation.

Other measures which should be implemented are:

285

1. Funding of necessary wildlife studies to provide necessary base data.

2. Timing of operations during the year to avoid critical wildlife use periods.

3. Keep roads off of steep slopes.

4. Use of helicopters in unroaded areas for hauling equipment and personnel.

285. The Task Force has no authority to commit funding for wildlife studies. The three additional measures have been noted.

PART 3. TRANSPORTATION AND UTILITY SYSTEMS

Chapter I -- DESCRIPTION OF ACTION UNDER CONSIDERATION

B. RAILROAD NETWORK

286 No mention is made in this section as to the number of miles of track siding that is proposed. Where will the storage of empty ore cars be located during periods of nonoperation?

286. According to Union Pacific Railroad, there will be no storage of empty cars.

Chapter II -- DESCRIPTION OF THE EXISTING ENVIRONMENT

A. NATURAL ENVIRONMENT

6. WILDLIFE

287 Page 3-14, paragraph 2, lines 1 - 4: This statement is erroneous. To our knowledge, there is no deer migration that crosses the Blackfoot Lava Field and Five Mile Meadows. This migration has been primarily confined to the area between Soda Springs and approximately one mile north of the Monsanto Plant.

287. The text has been corrected.

288 Page 3-14, paragraph 3: This statement infers that migration routes have been identified and are located in corridors. Available data does not confirm this and actual routes between summer and winter range have not been specifically located.

288. Precise locations should not be inferred from the listing of general locations.

7. FISHERIES

289 Page 3-16, paragraph 3, line 3: The entire Blackfoot River should be listed here rather than just the Blackfoot Narrows.

289. The text has been changed accordingly.

290 Page 3-16, paragrsph 3, line 4: Maybe Creek does not support significant fish populations now since most of the lower portion has been altered by mining activities.

290. The reference to Maybe Creek has been deleted.

291 Page 3-16, paragraph 3, lines 4 - 6: Again, major emphasis is placed on the Blackfoot Narrows. It is important because of access to the river, spawning area and as a fishery. However, it must be pointed out that it is only approximately 5% of the total river, all segments of which are vitally important.

291. The text has been changed to refer to the Blackfoot River.

Chapter III -- ENVIRONMENTAL IMPACTS

A. NATURAL ENVIRONMENT

1. LAND RESOURCES

292 Page 3-24, paragraph 2: Where will the 160,000 yards of rock come from? Won't the removal of this rock be a significant impact if taken from natural areas?

292. Much of the rock would come from cuts to maintain desired grade.

5. WILDLIFE

293 Page 3-26, paragraph 2, line 7: Delete: ...The following number...; Insert: ...The following estimated number...

294 Page 3-27, paragraph 2, line 5: Delete: ...A loss...; Insert: ...An immediate loss...

295 Page 3-27, paragraph 4: Insert: "Any hauling of ore or refined products during the winter months will require the continual plowing of roads and tracks to remove snow. Snow trenches will be created that will provide movement areas for moose that winter in the area but will subject them to encounters with trains and vehicles."

296 Page 3-27, paragraph 5, line 3: Delete: ...known strutting...; Insert: ...known sage grouse strutting...

297 Page 3-28, paragraph 1, line 1: Delete: ...The improvement...; Insert: ...The increased improvement...

298 Page 3-28, paragraph 2, line 3: Delete: ...found 145 nesting...; Insert: ...found 100 nesting...

299 Page 3-28, paragraph 2, line 5: Delete: ...could significantly...; Insert: ...will significantly...

293 through 299. The text has been changed accordingly.

300 Page 3-28, paragraph 5, line 4: This is not data obtained from the Department of Fish and Game.

300. The source of the data is the U.S. Fish and Wildlife Service. The text has been changed accordingly.

Chapter IV -- MITIGATION MEASURES

301 Page 3-37, paragraph 4: Monitoring is not a form of mitigation but should be considered after effective mitigation provisions have been implemented.

301. See response to comment number 245.

302 Page 3-38, paragraph 5: Although reference is made to mitigating measures on outdoor recreation, no mention is made of any for fish or wildlife. We feel the impacts from the transportation system will be as significant as any other operation and should receive special emphasis.

303 Should mitigation be applied in the form of special drift and barrier fences, crossing structures, such as overpasses or underpasses, who will be responsible for the costs; the sportsmen of Idaho, Union Pacific Railroad, mining companies or the Federal government who approves the plan?

Chapter VI -- SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY OF THE AREA

304 Page 3-42, paragraph 2, line 5: Delete: ...other areas.; Insert ...other areas resulting in a population reduction.

Chapter VII -- IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

305 Game migration routes, if totally blocked, cannot be restored and would result in an irretrievable loss.

Chapter VIII -- ALTERNATIVES

306 Page 3-52, paragraph 1, lines 6 - 10: Why shouldn't consideration be given to make adjustments in royalties and allocations so that monies could be made available to adequately compensate for the fish and wildlife losses to the State?

302. Reference to mitigating measures for fish are discussed. Mitigating measures for wildlife are discussed in Part 1; they also apply here.

303. Allocation of costs would have to be determined at such time as the measures were deemed necessary.

304. The text has been changed accordingly.

305. The text has been amplified to include this comment.

306. This is possible, but would require Congressional action.

PART 4. ALUMENT GROUP -- PART 4.1 -- DIAMOND CREEK MINING PLAN

Chapter I -- DESCRIPTION OF PROPOSED ACTION

307 Page 4-9, paragraph 2: Is there any backup system designed for the settling ponds that will prevent settlings and water from entering Diamond Creek should there be a dam failure?

307. There is none shown in the proposed mining plan as submitted.

Chapter II -- DESCRIPTION OF THE EXISTING ENVIRONMENT

6. WILDLIFE

308 Page 4-21, paragraph 4, lines 2 and 3: Delete: ...include mountain hare, muskrat, porcupine, deer mouse, and other rodents.; Insert: ...include snowshoe hare, muskrat, porcupine, deer mouse, badger, weasel and other rodents.

7. FISHERIES

309 Page 4-22, paragraph 2, line 6: Delete: ...River system and,...; Insert: ...River and reservoir and,...

310 Page 4-22, paragraph 2, lines 8 and 9: Delete: The efficiency of the annual stocking with Henry's Lake cutthroat trout is unknown.

311 Page 4-22, paragraph 3, lines 3 and 4: Delete: ...the resulting lowered productivity,...; Insert: ...the degraded habitat,

308 through 313. The text has been changed accordingly.

Chapter III -- ENVIRONMENTAL IMPACTS

2. WATER RESOURCES

312 Page 4-27, paragraph 4, line 1: Delete: ...will probably...

313 Page 4-27, paragraph 4, line 2: Delete: ...plant may also...; Insert: ...plant will also...

5. WILDLIFE

314 Page 4-29, paragraph 7, lines 2, 3 and 4: Delete: ...will force beaver and moose into the upper reaches of the Diamond Creek drainage and will displace...; Insert: ...will reduce moose and beaver populations along with...

6. FISHERIES

315 Page 4-30, paragraph 3: If the estimated increases in sediment are such that they will cover the streambed with silt, as stated on page 4-27, the impacts on aquatic life are going to be significant.

316 Page 4-30, paragraph 3, line 4: Delete: ... Diamond Creek. Impacts would likely be moderate.; Insert: ...Diamond Creek, Blackfoot River and reservoir. Impacts would likely be high.

Chapter IV -- MITIGATING MEASURES

317 Page 4-35, paragraph 4: If only the particulate matter will be settled out, is there provisions to take care of the dissolved solids in the pit water? What criteria will be used in monitoring to prevent excessive loads of dissolved solids from entering Diamond Creek?

Chapter V -- ADVERSE EFFECTS THAT CANNOT BE AVOIDED

318 Page 4-37, paragraph 4, line 17: If capacities are to be exceeded as stated, does this mean there will be direct dumping into the creek?

319 Page 4-39, paragraph 4, line 3: Delete: ...immediate area.; Insert: ...immediate area and downstream into the Blackfoot River.

320 Page 4-40, paragraph 2, lines 3 and 4: Delete: ...degrees in the short term and to a lesser degree in the long term.; Insert: ... degrees.

314. The text has been changed accordingly.

315. Silt covering the stream bottom will undoubtly cause high mortalities in the aquatic populations present. Low population levels will continue until silt deposited on the stream is moved and deposited in other areas where aquatic populations will be less affected.

316. The text has been changed accordingly.

317. Dissolved solids should not be a problem. Leachates from mine dumps, etc. show little if any difference from natural waters.

318. If capacities are underdesigned, there would be direct discharge to streams.

319 & 320. The text has been changed accordingly.

Chapter VI -- SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

321 Page 4-41, paragraph 2, line 5: Delete: ...be reduced during...; Insert: ...be lowered during...

321. The text has been changed accordingly.

322 Page 4-41, paragraph 3, line 8: Insert: ...fish populations. Reductions could also be anticipated in the Blackfoot River and reservoir.

322. The text has been amended to reflect this comment.

323 Page 4-42, paragraph 2, line 16: Delete: ...fully renewable...;

323. The Task Force believes that after mining, some restoration the open area and aesthetic appeal can be restored. The text has not been changed.

PART 4. ALUMENT GROUP -- PART 4.2 -- SWAN LAKE GULCH MINING PLAN

Chapter II -- DESCRIPTION OF THE EXISTING ENVIRONMENT

6. WILDLIFE

324 Page 4-59, paragraph 2, line 1: Insert: ...elk, moose, coyote...

324. The text has been changed accordingly.

PART 6. EARTH SCIENCES, INC., PARIS-BLOOMINGTON MINING PLAN

Chapter II -- DESCRIPTION OF THE EXISTING ENVIRONMENT

6. WILDLIFE

325 Page 6-15, paragraph 5, line 4: Delete: ...early summer.; Insert: ...early summer using portions of it for nesting and brood rearing.

7. FISHERIES

326 Page 6-16, paragraph 1, line 1: Insert: ...trout, wild rainbow trout and...

327 Page 6-16, paragraph 1, line 5: Delete: ...diversions,...; Insert: ...diversions and power production,...

328 Page 6-16, paragraph 1, lines 6 and 7: Delete: The Bear River at its confluences with Paris and Bloomington Creeks has good fishery value.

Chapter III -- ENVIRONMENTAL IMPACTS

5. WILDLIFE

329 Page 6-22, paragraph 3, line 3: Delete: ...As many as 50 deer; Insert: As many as 100 deer.

Chapter V -- ADVERSE EFFECTS THAT CANNOT BE AVOIDED

330 Page 6-28, paragraph 2, line 1: Delete: ...perhaps 50 deer...; Insert: ...perhaps 100 deer...

325 to 330. The text has been changed accordingly.

PART 7. FMC CORPORATION, DRY VALLEY MINING PLAN

Chapter II -- DESCRIPTION OF EXISTING ENVIRONMENT

7. FISHERIES

331 Page 7-14, paragraph 4, line 1: Delete: Dry Valley has a minor fishery, but supports...; Insert: Dry Valley Creek has a small cutthroat trout population and supports...

331 through 333. The text has been changed accordingly.

Chapter III -- ENVIRONMENTAL IMPACTS

5. WILDLIFE

332 Page 7-19, paragraph 3, lines 1 and 2: Delete: ...of as many as 100...; Insert: ...of significant numbers of...

6. FISHERIES

333 Page 7-19, paragraph 5, lines 1 and 2: Delete: ...the minor, limited fisheries...; Insert: ...the small fish population...

334. The company states that it will stock the pond with fish.

Chapter IV -- MITIGATING MEASURES

334 Page 7-22, paragraph 2, line 16: Delete: ...with fish.; Insert: ...with fish if conditions are feasible.

335 Page 7-24, paragraph 5, line 2: Delete: about 100 deer...; Insert many deer...

335 through 338. The text has been changed accordingly.

336 Page 7-24, paragraph 5, line 6: Insert: New sentence: "These displacements will reduce herds in the area through increased competition for food and cover."

337 Page 7-24, paragraph 6, line 1: Delete: A minor fishery in...; Insert: A small fish population in...

Chapter VI -- SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

338 Page 7-27, paragraph 3, line 5: Delete: ...for about 100 deer...; Insert: ...for a large number of deer...

PART 8. INTERNATIONAL MINERALS AND CHEMICAL CORPORATION, HUSKY NO. 1 MINING PLAN

Chapter II -- DESCRIPTION OF THE EXISTING ENVIRONMENT

A. NATURAL ENVIRONMENT

6. WILDLIFE

339 Page 8-19, paragraph 2, line 10: Delete: ...Creek drainage.; Insert: ...Creek and Stewart Canyon drainages.

339. The text has been changed accordingly.

7. FISHERIES

340 Page 8-20, paragraph 3, lines 2 and 3: Delete: Fishery values are low but the stream probably contributes small numbers...; Insert: The stream contributes numbers...

340. The Task Force believes the statement is correct as it stands.

341 Page 8-20, paragraph 3, line 4: Delete: Diamond Creek.; Insert: Diamond Creek, Blackfoot River and reservoir system.

342 Page 8-20, paragraph 4, line 2: Delete: ...has no fishery value.; Insert: ...has a low fishery value but provides unpolluted water to the system.

341 through 344. The text has been changed accordingly.

Chapter III -- ENVIRONMENTAL IMPACTS

A. NATURAL ENVIRONMENT

5. WILDLIFE

343 Page 8-24, paragraph 4, line 2: Insert: ...for deer, elk, moose and...

Chapter VI -- SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

344 Page 8-32, paragraph 4, line 2: Insert: ...50 elk, some moose and...

Chapter VII -- IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

345 Page 8-34, paragraph 1, lines 12 and 13: Delete:...irretrievable, but limited.; Insert: ...irretrievable.

345. The loss will be small; the statement is correct as it stands.

346 Page 8-36, paragraph 2, lines 5 and 6: Delete: ...and fisheries in Stewart and Diamond Creeks.; Insert: ...and fish populations in Stewart, Diamond Creek and Blackfoot River and reservoir.

346. The text has been changed accordingly.

PART 9. MONSANTO COMPANY -- PART 9.1 HENRY NORTH CONTINUATION MINING PLAN

Chapter V -- ADVERSE EFFECTS THAT CANNOT BE AVOIDED

347 Page 9-22, paragraph 5, line 2: Delete: ... Reservoir.; Insert: ...Reservoir where impacts could be severe.

347. The total impact on the Blackfoot River and Reservoir is projected to be moderate. The change has not been made.

Chapter VI -- SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

348 Page 9-25, paragraph 2, line 5: Delete: ...capacity.; Insert: ...capacity and may well be lost.

348. This is so stated on page 9-27 of the DES.

PART 9. MONSANTO COMPANY -- PART 9.2 TRAIL CREEK MINING PLAN

Chapter II -- DESCRIPTION OF THE EXISTING ENVIRONMENT

A. NATURAL ENVIRONMENT

7. FISHERIES

125

349 Page 9-44, paragraph 4, line 1: This statement says there will be no direct effect on fisheries in Slug Creek. However, on page 9-43 under 2b, Water Quality, it states: "The dumps at Trail Creek site may erode significantly; sediment may be carried to Slug Creek." If this statement is correct, and we agree it is, then significant adverse effects to the fishery can occur which is contrary to the statement under Fisheries.

349. Page 9-43 of the DES also states that the half mile or more of alluvium will probably prevent the silt from reaching Slug Creek. The text has not been changed.

Chapter V -- ADVERSE EFFECTS THAT CANNOT BE AVOIDED

350 Page 9-48, paragraph 6, line 1: Delete: ...be minor.; Insert: ...be minor provided no sediment reaches the stream.

350. The text has been changed accordingly.

PART 9. MONSANTO COMPANY -- PART 9.3 CALDWELL CANYON MINING PLAN

Chapter III -- ENVIRONMENTAL IMPACTS

A. NATURAL ENVIRONMENT

6. FISHERIES

351 Page 9-71, paragraph 3, line 2: Delete: ...Slug Creek.; Insert: ...Slug Creek and waters downstream.

PART 9. MONSANTO COMPANY -- PART 9.4 BLACKFOOT BRIDGE MINING PLAN

Chapter V -- ADVERSE EFFECTS THAT CANNOT BE AVOIDED

352 Page 9-105, paragraph 5, line 1: Delete: ...on fisheries will be negligible unless...; Insert: ...on fish populations could be significant if...

351. The text has been changed accordingly.

352. Analyses of sediment impacts by Task Force hydrologists indicate low, if any, impacts to the Blackfoot River from this minesite. The text has not been changed.

PART 10. J. R. SIMPLOT COMPANY -- PART 10.1 NORTH TRAIL CANYON MINING PLAN

Chapter II -- DESCRIPTION OF THE EXISTING ENVIRONMENT

A. NATURAL ENVIRONMENT

6. WILDLIFE

353 Page 10-12, paragraph 5, line 2: Insert: Elk and deer...

7. FISHERIES

354 Page 10-13, paragraph 5, line 2: Delete: ...support fisheries...; Insert: ...support fish populations.

353 & 354. The text has been changed accordingly.

Map 8 -- HABITAT AND MIGRATION ROUTES OF BIG GAME AND GROUSE, SOUTHEASTERN IDAHO

Although this Department is credited with supplying the data for this map, much of the material has been altered or omitted. We, therefore, consider the map to be inadequate and unfactual for the following reasons:

1. Narrow continuous lines apparently depicting deer migration routes are shown as sage grouse migration routes.

2. Assuming these lines are deer migration routes, it could be assumed that there are known routes that follow a narrow corridor. To our knowledge, these specific routes are not known and data provided to the Environmental Impact Statement task force by our Department showed them as broad corridors primarily to show that animals move a considerable distance between summer and winter ranges.

3. Although we have knowledge that deer summering in areas north of Tincup Creek winter near Alexander, there is no migration that crosses the Blackfoot Lava Field at the north end of Five Mile Meadows. The major crossing area is restricted to the area between Soda Springs and Conda with most crossings now occurring just north of the Monsanto plant.

4. Sage grouse migration route west of Cranes Flat is shown as a deer migration route.

5. Big game winter range is not completely designated in the following areas:

    1. Tincup Creek
    2. Jackknife Creek
    3. Eagle Creek
    4. Willow Creek
    5. Grays Lake

Map 8 has been corrected on the basis of data obtained from the Idaho Fish and Game Department.

6. Moose winter range is not shown in the following areas:

    1. Upper Diamond Creek
    2. Areas along Idaho-Wyoming State line
    3. Slug Creek
    4. Fossil Canyon
    5. Dunn Canyon
    6. Montpelier Creek

7. The Wolverine-Henry Creek winter range is shown to include elk; it is deer winter range.

8. Elk are shown wintering on Poker Peak, Big Elk and Little Elk mountains. These areas are elk calving grounds.

9. Elk do not winter on Lower Bear Creek.

10. Only deer winter on Lower Fall Creek; it is not elk winter range.

11. There are no moose winter ranges shown north of Tincup Creek although this is an important moose area.

12. Sharptailed grouse ranges are not shown.

13. Forest grouse ranges are not shown but would be difficult to depict because they cover most timbered and riparian areas. Therefore, map heading should be specific as to types of grouse described.

STATE OF IDAHO

DEPARTMENT OF LANDS
STATEHOUSE, BOISE, IDAHO 83720

STATE BOARD OF LAND COMMISSIONERS
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ROY TRUBY
SUPT OF PUBLIC INSTRUCTION

24 August 1976

Mr. John Hough
Administrative Assistant
To The Governor
OFFICE OF THE GOVERNOR

Dear John:

In response to your request of August 10, 1976 concerning information needed by the Governor to address the draft Environmental Impact Statement on Development of Phosphate Resources in Southeastern Idaho, I have enclosed material on the following topics:

1. An analysis of new regulations under 43 CFR Part 3520, made effective by the Secretary of Interior on May 7, 1976 and their impact on the phosphate development in Southeastern Idaho.

2. An analysis of S. 391 passed over the President's veto on August 4, 1976, and its impact on the phosphate development in Southeastern Idaho.

3. An analysis of the July 23, 1976, comments by the Environmental Protection Agency, particularly the concept of declaring the western phosphate field as a known phosphate leasing area.

4. A status report on the Department's approvals/disapprovals of all applications and plans submitted by the phosphate industry since the Surface Mining Act became effective.

5. An analysis of the Draft Environmental Impact Statement.

If you should require additional information, please contact Terry Maley at 384-3568.

Sincerely,

GORDON C. TROBLEY
Director

GCT:ph

Enclosures

EQUAL OPPORTUNITY EMPLOYER

The below comments were essentially prepared by Area Supervisor, Eastern Idaho. The comments are not limited to State lands, but cover the total impacted area.

A map showing the proposed impacted areas as well as State lands in the area is attached.

1. The authors of the E.I.S. did not contact the Department of Lands either at the State or field level. A point in fact is the statement on page 1-185 stating that no information on number of fires or acreage burned is available on State, private or B.L.M. lands. The Cottonwood Forest Protective District has fire records which are available upon request.

2. It would appear that a more detailed accounting of the forest products resource is needed. Listed are 1,308 acres of Aspen and conifer with only 405 acres carried as timber. Timber types, stocking rates, and volumes per acre are needed. Considerable acreage is listed as "uneconomical to cut". The forest products industry might see it differently.

3. The forest industry in southeastern Idaho, Utah, and Wyoming has expressed a need for sawtimber. If the mining companies would plan far enough ahead they could allow for the harvesting and utilization of the merchantable timber on their proposed mining sites. Presently some small but saleable pockets of timber have been cleared and either burned or buried.

4. Some form of tree establishment on those north and northeast slopes may be feasible. They should possibly be included in the re-vegetation plan.

5. The livestock industry was not adequately considered in this statement. Certainly the livestock industry should have been contacted for their overall factual use data as they represent the major economic user of this land surface. A loss of forage and displacement of stock won't be the only impact. They will also be faced with interrupted stock driveways, additional road traffic and road kills, isolated water sources, needs for additional fencing, etc.

1. As early as October, 1974, the Task Force Leader met with Dr. Terry Maley, Director of the Department of Lands to discuss the preparation of the EIS. The additional data on fires have been added to the FES.

2. The Task Force believes that the data as presented are sufficient for purposes of this EIS. More detailed data on sawtimber in the Caribou National Forest are presented in DES-R4-76-15, Management Alternative for the Diamond Creek Planning Unit.

3. Where economically feasible, timber has been salvaged and sold. Monsanto, for example, has donated such timber to the LDS Church.

4. Tree establishment is being considered in ongoing research on revegetation.

5. These impacts are cited in the text. See Part 1, Chapter III, Agriculture and Range.

6. Throughout they speak of rehabilitation with native vegetative species. The U.S.F.S. and several mining companies spent considerable time and money on a rehabilitation study in this locale. Some of these results indicated introduced vegetative species were superior in production and soil stabilization. The estimate that only 50% of the carrying capacity will be restored on 75% of the displaced acres seems unacceptable if study results indicate introduced species superior, even on a temporary basis.

6. On a long-term basis , it is generally agreed by our specialists that productivity on reclaimed sites will be below that of the undisturbed sites. The 50 percent value is a good estimate. Reclaimed sites are inherently less fertile and harsher. High production on these sites has, to date, only been maintained by continued use of high amounts of fertilization and other maintenance programs.

7. On page 1-241 the claim is that 316 lessees use 140,400 acres of national resource land for an annual harvest of 17,500 AUM's. This is an average of 8 acres/AUM. On page 1-389 the study area reported will lose a total of 3,900 AUM's annually from 9,700 acres that will be partially or totally lost. This would average about 2.5 acres per AUM. The study land does not have that good a carrying capacity. This would tend to exaggerate the impact by 2.86 times the average for the area.

7. We do not believe the comparison is valid. The 3,900 AUM figure is based on a uniform 50 percent forage utilization potential on all disturbed lands. Current utilization is somewhat less due to terrain limitations and other factors. National resource lands are lands administered by the Bureau of Land Management. Many of these are at a lower elevation, generally rocky, steep, and less productive than the higher elevation lands typical of much of the areas to be disturbed. Thus, the value on page 1-241 is in fact, not an average of lands to be disturbed.

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8. Page 1-471 makes reference to 7,200 acres of vegetation removed from the mine sites over a 25 year period. However, 5,000 acres will be reclaimed. They assume a carrying capacity of 10 acres per AUM. Therefore, on the 1,650 acres left as open pit they will lose 4,100 AUM's of feed in the full 25 years. What happens to the remaining 550 acres not left to open pits or reclaimed?

8. These additional 550 acres consist of sediment retention ponds, roads, etc.

9. On page 6-16 there is a misleading statement to the effect that 355 cows and 11 horses graze 80 acres of national resource land from 5/16 to 9/30. That amounts to 1,647 AUM's on 80 acres or over 20 AUM's per acre and that's impossible in that area.

9. The 80 acres are part of a total operation. The text has been modified to clarify this.

10. Page 1-371 states that of the land to be disturbed 53% is sagebrush, 3% agricultural and 39% Aspen-conifer. No mention is made of a study to determine if any of this sagebrush land is potential cropland or if the 3% agricultural land or any potential cropland will be restored or developed into future crop production.

10. No study is anticipated at this time. It is assumed that (depending upon ownership constraints) suitable lands will come into crop production as it becomes profitable. The first goal of disturbed land reclamation is to stabilize the site. Once this is accomplished, cropping may again become a consideration.

11. What about the effects of the new industry's demands on agricultural water sources and the existing labor force? These are critical considerations.

12. The consideration given wildlife is staggering. Inconsistencies in number estimates appear throughout and give the impression of inaccuracy or lack of factual data. Game counts are apparently trend estimates and are not based on actual counts. Page 1-375 estimates 3,000 deer as an annual harvest loss in the study area. Page 1-468 indicates only displacement of between 1,640 to 2,260 deer by the year 2000. The concerns over areas of Mourning Dove habitat, Cottontail and Pygmy Rabbit populations, Song Bird displacement and altered mouse habitat seems redundant when considering the total available land mass.

13. On page 4-43 the first paragraph says that out of 58 million tons of phosphate rock at the Diamond Creek site that 1.4 million tons of flourine, 6300 tons of uranium, 46,000 tons of vanadium, and 50,000 tons of rare earth will be removed but not recovered. The question comes to mind why this couldn't be recovered. The phosphate mining and construction effort is carrying the major expense. There is already a vanadium processing plant at Soda Springs. Will this material be stock piled?

14. Page 4-69 indicates that at the Diamond Creek site forage will be removed from 699 acres of range land. Reportedly this will displace 400 to 500 deer, 15 elk, and 250 grouse. This claim also seems unreasonable, since wildlife populations at those high densities do not presently exist.

15. Sandhill Cranes and Whooping Cranes are mentioned regularly but nowhere does it mention at what population level they are being maintained. We have no idea what the loss of some of their habitat apparently will do to the total population numbers being maintained. What are the plans to control the displaced birds? Will there be compensation for crop damage from displaced cranes?

11. Expansion of the phosphate processing industry would create substantial demands for water. Part of this demand may be for water now allocated for agricultural purposes. How, if at all, the allocation of water for the phosphate industry would be made, is a legal problem that is recognized by the Task Force, but cannot be assessed because of the very complex river compacts and water right laws involved. The effect on labor is discussed on pages 1-391 through 1-415 of the DES.

12. The game counts are trend counts and are not used to depict the total number of animals within a given area. Since absolute numbers are impossible to acquire, the only figures available are the trend counts which are and should not be construed as total counts. Estimates of potential population levels based on carrying capacity were made from the best data available.

The displacement 1,640 to 2,260 deer will result in forcing these deer onto other deer winter ranges at carrying capacity. Therefore, overgrazing of these winter ranges will occur which will reduce their carrying capacity capabilities. The estimate of 3,000 deer as an annual harvest lost by year 2000 is believed to be conservative.

The purpose of discussing mourning dove habitat, rabbit habitat, song bird displacement and mice was an attempt to provide some idea of the total animal ecological relationships (food chains, animal ecological interrelationships, etc.) that will result as a result of mining.

13. The fluorine and uranium will be recovered; byproducts containing other elements will be stockpiled. The text has been amplified.

14. Wildlife impacts were evaluated on secondary and tertiary impacts such as increased vehicular traffic resulting in wildlife mortality and other human disturbance and are not related only to acres of vegetation disturbed.

15. The DES states that within the study area there are approximately 4,000 sandhill cranes during the fall migration. There are no programs aimed at establishing specific population levels at this time.

16. Nowhere in the Wildlife Section was it mentioned that upon reclamation the wildlife would be able once again to utilize this reclaimed acreage. Surely game use will not be prevented or lost forever on these reclaimed lands. There should also be some impact figure estimates on wildlife values returned upon reclamation.

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In summary, the E.I.S. is a mass of estimates and opinions with a few technological facts and figures --- all thrown together but not tied together. It is repetitious, contradictory, misleading in some of its facts and confusing to say the least. There are errors, omissions, and not enough comparison between long range and short range effects. Unequal coverage has been given each basic resource and use. Even more importantly it is too vague and too bulky to be a land manager's tool.

A condensed summary for each chapter in the E.I.S. would be very helpful to persons searching for alternatives, but lacking the time or the inclination to study the entire document. The major disadvantage of voluminous environmental impact statements such as this one is that its size discourages its use. An attempt should be made to eliminate some of the extraneous background data of less than an essential nature, particularly when it is repeated at various points in the document. An example of this is the discussion of climate which rambles on for 16 pages (1-30 to 1-45). There is no question that this discussion and many others could be greatly condensed without reducing its usefulness.

The format of environmental impact statements, in general, needs revision. Their effectiveness would be improved immensely if the data were tied together with more continuity, more tables and appendices were used, and a concerted effort to avoid duplication were made.

16. Because of the harsh climate, we estimate that reclamation will restore about 50 percent of the productivity of the mined areas. There is no implication that wildlife will be lost forever on these areas.

IDAHO DEPARTMENT of PARKS & RECREATION
Statehouse Mail 2263 Warm Springs Ave. Boise Idaho 83720 (208) 384-2154

R. P. Peterson, Acting Director

Cecil D. Andrus, Governor

August 23, 1976

Dr. Vincent McKelvey, Director
U. S. Geological Survey
National Center, M-S 108
Reston, VA 22092

Re. - Draft Environmental Impact Statement - Development of Phosphate Resources in Southeastern Idaho (543.17)

Dear Mr. McKelvey:

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The Recreation Division, Idaho State Parks and Recreation Department, has completed a review of the Draft Environmental Impact Statement (DEIS) on the development of the phosphate resources in southeastern Idaho. Our comments concern the present and future impact of the phosphate development as it relates to the outdoor recreation resources in Southeast Idaho, both natural resources and community recreation resources.

The State Recreation Division is responsible for undertaking the Statewide Comprehensive Outdoor Recreation Plan (SCORP) program in Idaho. This program, administered by the U.S. Bureau of Outdoor Recreation, Department of Interior, was established to help meet outdoor recreation needs of the nation through state administration of planning and funding programs. Our 1973 SCORP has spoken to the supply, demand, needs and environmental conditions of each of the six planning regions in the State of Idaho. The High Plains Region (Region V), the area in which phosphate development is proposed, was discussed in the 1973 SCORP.

The Division appreciates the fact that it has had an extended period, through unforeseen circumstances, to review the documents provided for phosphate impact. One of our concerns, in preparing this statement is the fact that there has been very limited coordination with state agencies by USGS for input in the early phases of document preparation. Staff members of the State Recreation Division were contacted about the contents of the Statewide Comprehensive Outdoor Recreation Plan (SCORP) and the projections for participation in recreation activities in southeast Idaho. However, we have been very discouraged with the attitudes of the USGS in regard to obtaining a greater amount of assistance from our staff in putting together the DEIS.

1 In general, we feel that the DEIS is deficient in several major areas. The assessment of phosphate impact on outdoor recreation opportunities in this area is one of the major deficiencies. The DEIS does not consider the impact on community recreation resources. Most of the impacts, are discussed in detail relative to hunting, fishing, snowmobiling, camping, etc. With the potential growth of phosphate exploration and processing, many of southeast Idaho's communities can be expected to grow substantially during the next ten years and into the year 2000. The accelerated growth will have a definite impact on the existing park and recreation facilities that are available in the communities serving the proposed developed sites. Many of these communities are presently deficient in recreation facilities to meet their present needs, (see enclosures). Accelerated growth materializing from expansion of phosphate leasing can only compound existing deficiencies.

2 Secondly, the proposed DEIS does not take into account the impact of transferring recreation use to areas outside of the immediate region. The DEIS does state that a large amount of recreation opportunities will be lost from the extraction of phosphate materials. However, in addition, opportunities for present hunting and fishing in this area will be dispersed or transferred to areas outside this immediate region. The DEIS does not assess this impact upon such resources as American Falls Reservoir and support facilities, the Henry's Fork of the Snake River, Teton River, Henry's Lake, Island Park Reservoir, and other quality resource areas. These and other areas may receive a greater share of use as a result of transfer of demand from residents who have normally hunted, fished, camped, hiked, etc., in the proposed leased areas. Likewise, the influx of new people also will be dispersed to these areas. The present DEIS is deficient in its analysis of the overall impacts of population growth and dispersement to other areas for recreation opportunities.

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The following specific comments relate to specific methodologies used for the DEIS and impacts of the proposed development.

3 In reviewing the methodologies for assessing recreation demand and use, we note that recent information developed by the Pacific Northwest River Basins Commission (PNWRBC) was not utilized in the report. The Regional Recreation Data Program, developed by the PNWRBC (Recreation Technical Committee) involved a three-state coordinated effort which included state and federal agencies. Information from this effort is available for some 34 recreation activities. Of particular interest is the estimation of recreation demand based on destination of users for nine specific recreation activities. This information is available through the Bureau of Outdoor Recreation, Seattle, or the State Recreation Division. A copy of the report is included with this statement.

1. The discussion of community recreation resources has been expanded.

2. We believe that the outdoor recreation opportunities lost as a result of mining--the hunting, fishing, snowmobiling, camping, etc.--will not be transferred outside the area, but will be relocated within the area.

3. The report cited has been considered in the preparation of the FES.

The State Recreation Division completed a detailed analysis of the recreation facility needs of 52 urban centers in Idaho. Within the High Plains Region, Region V, the urban centers of Blackfoot, Pocatello, Soda Springs, Montpelier, Preston, Malad City, and others with population over 2,500 were assessed. It did not appear as though the DEIS made use of this available information to assess community recreation needs (neighborhood parks, community parks, and regional parks). 4

Although the DEIS made reference to the impact of proposed roads, power lines, and other supporting facilities on recreation opportunities, the impact statement stopped short of assessing the impact these support facilities would have on cutting off access to other recreation areas used by campers, snowmobilers, ORV's and hunters. Often, a spur railroad line, a mining road, or fence line cuts off public access to public recreation lands that lie beyond the proposed developed sites. Such is the case in the Diamond Creek Area in the Upper Blackfoot Drainage Area. 5

Regarding mitigation measures outlined in the statement, we find that the proposed mitigation is unacceptable and does not cover the impacts of the proposed development. Although the Land & Water Conservation Fund was mentioned as a source of funds to help alleviate recreation impact, the statement briefly mentioned that monies would have to be provided by local communities or state agencies to match this 50/50 matching program. Often, this local matching money is not available to match the Federal dollars necessary to cover developments. The mitigation section did not mention who would have the primary responsibility of providing for user recreation displacement in that area. It did not identify the roles of the mining industry in helping to mitigate for lost recreation opportunities. 6

Regarding the impact of development, we feel that the statement is deficient in assessing total impact on various rates of development. Examples should be assessed relative to a slow rate of development and extraction of phosphate resources to an immediate 400Z leasing on all proposed areas and the resulting impact on regional recreation resources. 7

The statement is also weak in several other areas. These include: 8

(1) The effect of proposed developments on land values and the competition public agencies face in purchasing such lands for park and recreation use.

(2) The overall displacement impact of recreation to neighboring recreation areas and the impact this will have on existing facilities which presently may or may not be at their capacity. Related to this is the impact from increasing population that would migrate to this area in search of jobs or employment with the extractive industries and related businesses. 9

4. These data are included in the FES.

5. The manuscript has been amplified to reflect these concerns.

6. Commitments of responsibilities for mitigation is not within the authority of the Task Force. Insofar as possible, mitigating measures are identified in the text and residual impacts identified.

7. Impacts at a more probable level of mining of 15 MMT by the year 2000 have been added to the FES.

8. The text has been amplified to include this concern.

9. The text has been amplified to include this concern.

10 (3) The total effect of irreversibly altering the quality of outdoor recreation experiences now available.

The following specific items mentioned in the text are of concern to our Division:

11 Page 1-414 - This section indicates that a reduction in recreation quality will be affected in the immediate area, but no further explanation of the impact these displaced users will have on neighboring areas.

12 Page 1-414 - The impacts indicated from these developments suggests an impact of short duration. What is the definition of short duration? What does it constitute?

13 Page 1-145 - One of the items of mitigation discussed in this section suggests that closing utility corridors, railroad tracks, etc., after the operation is complete is a mitigating measure. This is not a mitigating measure. The original land and the access to other recreation facilities would be adversely affected during the time of operation of the proposed phosphate extraction. This is actually a corrective renovation. We suggest that the entire area that is affected during the construction of utility corridors, railroad spur lines, etc., be entirely rehabilitated rather than just "closing these areas off." The words "when practical" are not adequate for renovation of these areas. This should be a requirement in the terms of the leases for phosphate development.

In summation, the State Recreation Division appreciates the opportunity for providing comments on proposed actions of this nature. However, it appears as though a lot of time and money could be saved if the state agencies, including the State Recreation Division, were contacted earlier to have input in the development of this or any other Draft Environmental Impact Statement. A greater amount of research material would have been identified and provided had the process followed a cooperative effort rather than what appeared to be a rush job for private interests in the preparation of a report of this nature.

We feel that the present Draft Environmental Impact Statement as written is inadequate in its assessment of impact on recreation resources, both in a natural setting and in a community setting. We feel that additional information was available to give additional assessment of the demand for recreation opportunities in this area of Idaho. We would recommend and hope that the U.S. Geological Survey will upgrade the Final Environmental Impact

10. The text has been amplified to include this effect.

11. The discussion of impacts on neighboring areas has been amplified in the FES.

12. The Task Force considered short duration as about 25 years.

13. The text has been amplified to include this comment.

Statement. The final statement should consider the impacts resulting from the transfer of demand or opportunities to other areas in this Region and to neighboring regions which will receive increased use resulting from expansion of phosphate extraction and the reduction of existing recreation opportunities in that part of Idaho.

Sincerely,

R. P. Peterson
Acting Director

cc: Governor Cecil D. Andrus
Mr. Maurice Lundy, U.S. Bureau of Outdoor Recreation
Mr. Donald Dubois, Regional Administrator, Environmental Protection Agency
Mr. Merle Allison, Chairman, Idaho Parks & Recreation Board
Mr. Herman McDevitt, Member, Idaho Parks & Recreation Board - Pocatello - High Plains Region
Mr. Shirl Boyce, Chief, State Planning & Community Affairs

encls. Recreation Data Package Report
Local Assessment Summaries for neighborhood park needs with & without Phosphate Impact
State Park Statistics for Bear Lake and Indian Rocks State Parks

jm

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

Cecil D. Andrus
Governor

R. Keith Higginson
Director

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COMMENTS ON THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT
ENTITLED
"DEVELOPMENT OF PHOSPHATE RESOURCES
IN SOUTHEASTERN IDAHO"

GENERAL COMMENTS:

The published draft EIS is much improved over the original draft statement supplied to this agency previously. Many of the previous errors and omissions have been corrected. However, we believe the report still is deficient in several areas. I will discuss details later in this statement. Generally the report reflects the totally federal membership of the Task Force. The economic and natural resource systems of the area do not appear to be understood by the authors. Much of the problem could have been avoided if the Task Force had actively contained members from non-federal entities who have responsibilities in the area and are familiar with local conditions. Because of our brief contact with the Task Force and the short time frame available to review the EIS, it is also difficult for us to comment on much of the background material contained in the documents particularly. 140

We are concerned that the alternatives considered are so narrowly construed. Even if present law limits the alternatives 1

1. Several of the alternatives available to the Secretary of the Interior would require Congressional legislation if selected. It is not the role of the Task Force to select or recommend to the Secretary any particular alternative, but rather to lay out the alternatives and their environmental implications. The Secretary may, of course, select as a course of action, an alternative requiring changes in existing laws. The Secretary would then have to seek such changes.

available, we have not previously witnessed any reluctance by federal agencies to recommend changes in law when circumstances were such that they concluded that such changes were necessary.

Perhaps the greatest deficiency in the EIS draft is the total lack of any discussion of monitoring, both prior to development and during development. Costs of monitoring will be substantial, but are a burden that should be recognized as a cost of any proposed development. This is significant when in both Volumes I and II so many conclusions are qualified by the statement that adequate data was not available, particularly when dealing with natural resources. It would seem that if the team recognized the data gap as being so great, they should have addressed the problem in greater depth in the EIS draft. The State of Idaho can not, particularly with regard to natural resources, provide the funding that will be required to maintain adequate monitoring and data collection, much of which must precede development. The mining companies, in our opinion, should be required to provide the funding necessary, either directly or indirectly, as a cost of operation and development.

Many of the statements in the report are so subjective that they are difficult to interpret. In Volume I, potential problems are identified and solutions suggested with the assumption that they will be implemented "if practical"; then in Volume II, these solutions are identified as being impractical. We feel that the alternatives identified in Volume II are not adequate. The companies really haven't identified alternatives, just preferred courses of actions. The environmental analysis of the so-called "alternatives"

2. An amplified discussion of monitoring has been included in the final statement.

3. Chapter VIII of each Part of this EIS discuss the alternatives to this proposed actions, in both the Regional and site-specific contexts, identified by the authoring federal agencies. The various applicants are not obligated to present alternative proposals or applications. Response to the balance of the concurrent is not possible due to its non-specific and highly generalized nature.

and impacts in Volume II do not agree in many cases with the analysis in Volume 1. Problems identified in Volume 1 are not treated or recognized with respect to the company alternatives analyzed in Volume II.

3

The draft statement does not include sufficient hydrologic maps indicating stream values to allow detailed analysis. Such information is available and was available at the time the draft was written. As the draft presently exists, it appears to ignore such values. We see very little information included on any efforts to provide mitigation for adverse impacts on stream values. Because of this, the department may not be able to approve the required stream alteration permits for some proposed activities.

4

Of major concern is what is meant by the terminology "reclamation". It appears from the report that "reclamation" merely means that some mechanical process has taken place. We see very little assurance that such reclamation efforts will be required to result in return of the land or stream to its former productivity. In fact, the draft indicates that the reclamation efforts are not expected to return the land to its former levels of productivity. The total impact of the development will increase dramatically with time if reclamation is not effective.

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5

Many legal and property rights appear to be ignored or are unidentified. The report indicates that some presently perennial streams will become intermittent streams because of disruption of the water source. There is no indication of who will be providing compensation, or replacement water to those who have previously developed water rights downstream, and who will be deprived of

6

4. The maps of stream values, as shown in the Idaho Environmental Review, dated November 1975, are too general and too small in scale to be meaningful.

The responsibility for approval of stream alterations rests solely with the Idaho Department of Water Resources. Lessees must obtain such permits where necessary.

5. Reclamation efforts are designed to return the land to its original productivity insofar as is possible. Several key reclamation requirements are cited among the thirteen requirements are listed in Part I, Chapter IV. These include salvaging topsoil, revegetation, fertilization, mulching, etc. However, because of the harsh climate, limited availability of topsoil, lack of moisture in the growing season, and other factors, it is not likely that full productivity would be established for many years. Vegetation experts with the U.S. Forest Service conservatively estimate that in this lengthy interim period, productivity would be about 50 percent.

6. The Task Force recognizes that many legal problems may accrue from acquisition of water for the projected phosphate industry. However, the nature, timing, and location of these problems cannot be identified and addressed within the framework of this study.

such water use under the identified alternatives. Similar problems may occur with respect to loss of storage or diversion facilities as a result of sedimentation. Who will pay for the additional cost for streambank maintenance that will probably result from the change in hydraulic regime and increased sediment load?

6

There is very little consideration of what stream alterations or impoundments can be allowed under Idaho law. Lack of information in the report about the regulatory requirements of the State of Idaho Stream Channel Protection Act is sufficient to justify our comment that state interests should have been included on the Task Force. Such an arrangement would certainly enable a better analysis of what our state laws and regulations are.

7

With respect to specific comments, we submit the following:

(1) There is considerable confusion about the name of this department. Several names are used in the report. The Idaho Department of Reclamation, the Idaho Department of Water Administration, and the staff of the Idaho Water Resource Board are all predecessor names of the current Department of Water Resources.

8

(2) P. iii - At a minimum, the following groups should have been given an opportunity to comment on the statement: Idaho Cattlemen's Association, Idaho Sheep Commission, Idaho Wheat Commission, and the Idaho Department of Agriculture, in addition to the agencies and groups listed.

(3) P. 1-24 - To help eliminate confusion in labelling, use of both the terms "short tons" and "tons" should be discouraged and uniform labels used.

9

7. Further discussion and clarification of State laws and regulations have been added to the text.

8. In several cases, the former name was used to identify sources of data. These have now been identified as predecessors of the Department of Water Resources.

9. Short tons and tons have been inadvertantly used interchangeably. Both refer to short tons.

10. (4) P. 1-25 - The demand forecast and other economic data is not documented as to its source.

(5) P. 1-234 - 1-236 - The description of land use is vague and general. On page 1-236, a statement is made that barley is produced at high elevations where the growing season is shorter. More than likely, if farmers and ranchers in the area were contacted, this statement would read wheat is produced at higher elevations.

11. (6) P. 1-238 - The statement is made that row crop production is limited to the Upper Snake River Valley. However, the 1969 Census of Agriculture shows 3,599 acres of potatoes in Caribou County alone.

(7) Pgs. 1-238 - 1-239 - In general, the analysis of agriculture existing in the area is vague, and the methodology for preparing the tables on page 1-238 and 1-239 is questionable.

12. (8) P. 1-324 - Some descriptions are vague.

13. (9) P. 1-342 - No base data on initial concentrations of chemicals is included in the last paragraph.

14. (10) Pgs. 1-341, 1-371, 1-389 - There is an inconsistent figure used on the amount of acreage that will be disturbed.

15. (11) P. 1-372, paragraph 1 - A change is shown again with no base data on initial chemical concentrations.

16. (12) P. 1-389 - Statement should indicate the number of ranchers that will be forced to convert land from agricultural to other uses. How many head of cattle and sheep will be affected? Ranchers should be made aware of potential impacts, and have an opportunity to comment.

10. The demand forecast was developed from an unpublished report to the Task Force from the U.S. Bureau of Mines. This is so stated on page 1.25 of the DES.

11. Although the description of land use is general, it is believed adequate for this EIS. The discussion on small grains, including wheat and barley, was developed from information and data from the Agricultural Stabilization and Conservation Service offices in the area and is considered correct, except for the statement on row crops, which has been deleted. The section on agriculture was reviewed by the College of Agriculture, University of Idaho, Moscow, Idaho, in its preliminary form and considered satisfactory.

12. The precise descriptions and locations are not necessary. None are located on or near leaseholds proposed for mining or proposed locations of beneficiating plants. They have been listed here as a general documentation of the designated sites in the overall study area.

13. Additional data have been included in the text.

14. The value on page 1-371 of the DES is correct. The other two values have been revised.

15. Additional data have been included in the text.

16. Additional data obtained from county agricultural agents and the College of Agriculture, University of Idaho, have been included in the FES.

(13) P. 1-389 - Approximately 3,900 AUM's will be lost. What percent of these are from private, national forest, and BLM ranges and who currently owns the ranges or grazing permits? How was this loss figure determined? 17

(14) P. 1-472 - Indicates 4,100 AUM's will be impacted - inconsistent with p. 1-389. 18

(15) P. 1-390 - The statement is made that livestock "operations and grazing systems will have to adopt to new obstacles and problems posed by the industry". It seems that this flexibility should be required of the phosphate industry where possible, such as with plant siting. 19

The impact on the local economy and state economy of the loss and displacement of the area livestock industry has not been evaluated. The livestock industry has been the long time stabilizer of the local economy of the area. Now it is being swept aside for a mining boom of unknown duration. More information is needed on incidence and frequency of livestock losses due to fluorosis. 20

Twelve pages were devoted to a breakdown of wildlife impacts in the study area, including such animals as the house mouse and Norway rat (p. 1-379). The livestock industry was dealt with in three pages with a few generalities. More investigation and input from interested groups and individuals is necessary regarding the livestock industry to fully evaluate the impacts.

(16) P. 1-422 - It is not clear which government agencies are responsible for the seven enforcement areas. 21

17. The AUM's were based on estimates of potential forage yield of the sites that would be disturbed, assuming that 50 percent of forage produced would be utilized.

Of the disturbed land, 5 percent is BLM land, 45 percent Forest Service, 30 percent private, and 20 percent State-owned. Grazing losses would have similar percentages. Grazing permits and leases on BLM, Forest Service and State lands are held by local sheep and cattlemen. Although some private lands are leased for grazing, most are used by the owners.

18. The figures have been corrected for consistency.

19. The statement as it stands is unintentionally harsh. The phosphate industry has been encouraged to and indeed are cooperating with farmers and ranchers in the area. An example of this is an extensive livestock watering system to be built in Dry Valley at the mining company's expense.

20. A substantial input to the FES has been obtained from State and local agricultural and livestock interests. To the extent possible, impacts on the economy have been assessed.

21. Enforcement of the 13 requirements listed would primarily be the responsibility of the U.S. Geological Survey, which monitors mining operations on Federal leaseholds. Additional responsibility would rest with the Forest Service, where national forest lands are involved, and with the Bureau of Land Management were national resource lands are involved.

22 (17) P. 1-440 - No mitigation measures were included for specific displaced livestock operations.

22. Specific mitigation measures must be determined on a case-by-case basis. This has been so noted in the text.

23 (18) P. 1-471 - Indicates in the mitigation that stockmen "unable to change their operations may be forced to sell out". Is this mitigation?

23. This is listed as an unavoidable impact. In some cases, sufficient mitigation to compensate for loss of extensive areas under grazing permits may not be available, and ranching operations may thus become uneconomical.

24 (19) A map should be provided indicating the quality of streams in the area with regard to fishery, water quality, recreation, water rights, etc.

24. Each of these subjects is treated in the text. Because of the lack of data on water quality in many of the small streams and the complexity of water rights, we do not feel that preparation of the suggested map is feasible.

25 (20) All alterations of continuously flowing streams will require permits. This includes encroachments for roads and railroad stream crossings and filling streams for waste dumps sites, as proposed on Diamond Creek tributaries, Swan Lake Gulch, Mabey Creek, Stewart Creek, and perhaps some others.

25. This is so stated in the text.

26 (21) Sediment loads in streams will cause significant fishery damage especially in the Blackfoot River drainage. There have been proposals for sediment ponds to control this to some degree; however, no plans for future maintenance (including cleaning) of these ponds are proposed and it may be many years before natural recovery takes place.

26. Discussion of maintenance has been added to the FES.

27 (22) Increased peak runoff due to lack of vegetation in the watershed and channelization of streams will be caused as infiltration into the soils decreases and time of concentration decreases. This could result in downstream flooding along many streams.

27. The increases as a result of devegetation and decreased infiltration will not likely cause significant increases in downstream flooding. In fact, it is quite possible that desynchronization of runoff could conceivably have the opposite effect and reduce flood peaks.

28 (23) Flows in some streams will be lost or drastically changed by development upstream which in many cases involves covering springs with waste dumps (1-481). This will cause some perrenial streams to

28. We agree. Such actions will require permits under the Idaho Stream Alterations Act.

become intermittent such as Swan Lake Gulch (4-64) and Trial Creek (9-43).

28

(24) The fishery in other parts of southeast Idaho will be harmed because muning will decrease fishery habitat while bringing more people to this part of the state who will cause an impact on the remaining fishery (1-475).

29

(25) Many of the tailings ponds, settlement basins, etc., will come under the jurisdiction of the Dam Safety Act. Since many of these can not be abandoned after mining is completed because of adverse effects they are helping to control, some provisions for continued future maintenance will be necessary. Perhaps bonding through the Federal government or the Department of Lands would be adequate. Where waste dumps could be considered dams under Idaho statutes, engineering design will be required. The proposal for Diamond Lake which will be created at a waste dump (4-5, 6, 7) is an example of a site that may be under jurisdiction of the Dam Safety Act. All such sites which could be considered dams (4-26, 37) will require spillways capable of carrying anticipated peak flows.

30

(26) The report indicates that many hydraulic structures will probably be inadequate during floods and will not control silt loads during peak flows (1-462).

31

(27) The report indicates that excavation through and filling of aquifers may change groundwater flow patterns.

32

(28) Any diversion of groundwater into stream channels (1-117) will increase stream flows and decrease stream quality while

33

29. This is so stated in the text.

30. We concur. A Federal requirement for maintenance has been added to the chapter on mitigating measures. Where State laws are applicable, lessees will require necessary permits or approvals.

31. This is so stated in the text.

32. This is so stated in the text.

33. This is so stated in the text.

decreasing the groundwater resource.

(29) Nitrates and other contaminants may affect the groundwater in some areas (1-133).

(30) The effects on groundwater quality due to recharge at pits is not known and it is possible that some of these pits could be classified as drain wells under Idaho law (1-346).

(31) Improperly sealed ponds could contaminate surface and groundwater resources (1-349).

(32) P. 1-459 - Report indicates a relative constant quantity of disturbed land throughout most of the project. It indicates that this can be maintained because reclamation is proceeding behind development of new areas.

However, on pages 1-466, 1-481, and 1-485, the report indicates that reclaimed areas will never recover many of the values lost during mining and in some cases productivity will be less than half of the former values even if reclamation is successful. If this is the case, we question how the report can indicate the amount of disturbed areas that will remain.

(33) P. 1-110 - The title of the Department of Water Administration should be Department of Water Resources.

(34) P. 1-114 - There should be an indication that the Department of Reclamation is now the Department of Water Resources.

(35) P. 1-276 - This section describing state controls completely ignores many regulatory responsibilities of the Department of Water Resources which apply directly to activities covered in the draft EIS, primarily in the areas of alteration of stream

1

34. This is so stated in the text.

35. This has been noted in the FES.

36. This is so stated in the text.

37. Disturbed lands, as considered in this statement, are those altered from the natural condition. Reclaimed lands are disturbed lands which have been shaped, seeded and stabilized. No inference is intended that reclaimed lands will again reflect the undisturbed situation.

38. The text has been changed to reflect new name.

39. The text has been changed to reflect new name.

40. These items are discussed on page 1-154, and on pages 1-420 through 427 of the DES. We agree that they will to some extent govern activities in the area.

channels, subsurface disposal of waste, dam or impoundment safety, data collection and water rights administration. All of these programs will to some extent govern activities in the area.

(37) P. 1-425, second paragraph - The statement that enforcement of all applicable federal and state laws and regulations will reduce the cumulative impacts on water resources from the proposed mining activities is misleading. Impacts could still be catastrophic even if "reduced" below what would occur with no controls. Many of the proposals analyzed in Volume II do not appear to be adequately accounted for by federal and state regulations.

(38) P. 1-155, second paragraph, item no. 1 - It may be incorrect; however, we are unable to tell from the draft the subject of the statement and as such can not suggest revision. Article 1, Section 14 of the Idaho Constitution, describes the right of eminent domain and contains the statement that private property may be taken for public purposes with just compensation for, among other things, drainage of mines. If this is what is being referred to on page 1-155, the statement should be more clearly worded.

(39) P. 1-109, figure 1-14 refers to the Bannock overthrust, Armstrong and Cressman, 1963, propose this term be no longer used and that the term Bannock thrust zone better describes the series of imbricate thrust faults now thought to exist in the area. The single large Bannock overthrust is not thought to be the correct interpretation.

(40) The area of development lies along the Intermountain Seismic Belt (UBC seismic risk Zone 3). The area is probably the most seismically active area in Idaho. If Isostatic rebound

41. We do not feel the statement is misleading. State and Federal regulations call for virtually no degradation of water quality. We recognize that catastrophic hydrologic events could occur, and have stated on page 1-357 of the DES and in several other places that breaching of sediment ponds is possible under extreme conditions.

42. The statement has been reworded to reflect the source as the Constitutional Right of Eminent Domain (Art. 1, Sec. 14, Idaho Constitution).

43. The Bannock overthrust is deleted; it is not essential to the illustration of hypothetical ground-water flow paths.

44. Isostatic rebound does not appear likely to be of significance for the amount of phosphate rock removed, based on the observation of other mining areas such as the Bingham open-pit in Utah. Any resultant activity would likely be minor.

Possible effects of earthquake activity are discussed on pages 1-48 and 1-49 of the DES. Earthquake studies of the area are at present inadequate for a more detailed and comprehensive treatment than that which is presented.

in the area should occur due to removal of large volumes of phosphate, seismic activity is unlikely. The statement makes only very brief mention of earthquake activity. A recent fault scarp three feet high can be observed in Issac Skinner's backyard in Conda.

44

(41) A map showing the processing plant locations has been provided but it should also show the area or areas of air quality degradation by the various pollutants emitted by these plants. A map showing potential pollution to surface and groundwaters would also be helpful.

45

45. Because of variations in climatic and atmospheric conditions, the areas affected by plant emissions varies widely. Any attempt at generalizing the impacted areas could be misleading. In general, the impacts are felt within two miles downwind of the emissions.

STATE OF IDAHO

CECIL D. ANDRUS
GOVERNOR
IDAHO TRANSPORTATION BOARD
CARL C. MOORE – CHAIRMAN
LLOYD F. BARRON – VICE CHAIRMAN
ROY L. STROSCHEIN – MEMBER

BARRELL V. MANNING
DIRECTOR

TRANSPORTATION DEPARTMENT

P.O. BOX 7129 BOISE, IDAHO 83707
PHONE (208)384-3699

July 27, 1976

Mr. Thomas S. Kleppe, Secretary
U. S. Department of Interior
Washington, D. C. 20240

Dear Mr. Secretary:

In review of the Draft Environmental Impact Statement for development of phosphate resources in Southeastern Idaho, it would appear that goals have been identified and resources analyzed. However, the document leaves the impression that the primary transportation concern is moving rock and electricity. Both of these commodities are absolutely necessary for the success of the mining plans but moving of people is also important to the overall success of the plan.

151

If moving people is really a serious consideration, then it should receive the same emphasis that is given to moving rock and electricity. Table 1-1 on page 1-4 indicates numerous new mines will be developed during the next five to seven years. New development requires concentration of labor related to construction of plant facilities for relatively short periods of time. This would 1 place population burdens on the area during the same period which would increase demands on existing transportation facilities. At the minimum this should include multi-modal analysis of the transportation alternatives tied to a phase implementation plan similar to the treatment given railroads in the document. Most importantly, funding sources should be identified and if there are funding deficiencies they should be recognized and dealt with at this time.

The major highway routes affected by the phosphate development are U. S. Highway 89, U. S. Highway 30, State Highway 34 and State Highway 36. From the standpoint of the Transportation Department travel improvements need to be planned to accommodate anticipated growth on these highways. Because of funding 2 limitations, development of a satisfactory roadway system would lag behind mining expansion. Even after funding is assured, project development takes five to eight years. It is unlikely the Idaho Transportation Department could meet these demands on a timely basis.

Mitigation measures assume the Idaho Transportation Department can finance any project needed in the area. This is a false assumption. The Transportation 3 Board has made commitments for funds on a long range basis. Changes in its program are reflected in lower maintenance, safety, and service levels in those sections where improvements are delayed.

1. A more thorough discussion of public transportation systems has been added to the text.

2. The text has been amplified to express this concern.

3. There is no inference intended that the Transportation Board can finance any road project in the area, and the reference to highway improvements on pages 1-450 and 1-451 of the DEIS has been clarified. This is further discussed on pages 1-411 and 1-475.

In Chapter VIII, Alternatives, Section H, the statement is made, "An extensive discussion of alternatives for general transportation and utility systems that serve the phosphate region in Southeastern Idaho exceeds the scope of this statement." Since there are impacts associated with the proposal, an analysis should not be beyond the scope of this statement. 4

A public transportation system similar to that serving the Federal Energy Commission in Eastern Idaho may be a logical solution to some of the transportation problems. Funding for such a system should come from users and mining companies. 5

While this report is more comprehensive than the initial draft, it still leaves many questions as to how public improvments can be funded and built to meet transportation needs generated by mining plans. The final draft should include this information.

Very truly yours,

Darrell V Manning

DARRELL V MANNING
Director

4. The Task Force believes that by far the major impact to the general transportation and utility system of the area will result from the overall projected growth not related to the phosphate industry. Population increases, as projected in the draft EIS, consist of 22,300 as a result of proposed phosphate expansion versus a high estimate of 162,400 and a medium estimate of 143,400 overall population increase by the year 2000 AD. This is 14 percent of the high estimate and 16 percent of the medium estimate, over a 25-year period.

Revised estimates of both overall population increases and phosphate-related population increases based upon a more probable level of mining of 15 million tons by the year 2000 indicate that phosphate-related increases will be only 8 percent of the total projected population increase. It is clear that the resultant increase from growth of the phosphate industry is only a very small fraction of the total problem that needs to be addressed. Addressing this total problem is beyond the scope of the EIS.

5. Reference to the transportation system serving the ERDA site of Arco has been incorporated into the text.

June 7, 1976

MEMORANDUM

TO: M. Karl Shurtliff, President Idaho Public Utilities Commission
Ken Stolz, Division of Budget, Policy Planning and Coordination

FROM: A. J. Hadley, Director of Utilities

SUBJECT: Comments on Draft Environmental Impact Statement for Phosphate Resources in South Eastern Idaho

The draft EIS has varied somewhat from the preliminary draft commented on in January, 1976.

Energy consumption of the projected phosphate activities within Idaho includes aproximately 87.9 billion Kilowatt hours of electrical energy and 104.2 billion cubic feet of natural gas. Usage will occur over the next 23 years, to consider the impact, time of implementation and construction must be accurately predicted.

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Natural Gas

Known feedstock requirements for natural gas in addition to existing usage totals 287.3 million therms of which 173.3 will be needed prior to 1990 and the remainder 114 between 1980 and 1982. Usage would be 43.2 million therms annually through 1980 and 57 million therms annually between 1980 and 1982. Becker Industries and J. R. Simplot presently consume aproximately 110 million therms annually. The noted increase of approximately 50% consumption would require a 12½% increase in total deliveries of natural gas by Intermountain Gas Company. Becker Industries would be the only firm affected in regards to expansion by a shortage of natural gas to meet a future additional capacity.

Electricity

New facilities and additional capacity will add approximately 27 billion Kilowatt hours to existing requirements over the next 23 years within the State of Idaho.

Providing expansion proceeds as projected, the following table shows additional usage during specific periods required to need additional production.

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AND COMMUNITY AFFAIRS

1977 through 1980 -- .893 Billion KWHR
1981 through 1985 -- .643 Billion KWHR
1986 through 1990 -- 8.51 Billion KWHR
1991 through 1995 -- 8.51 Billion KWHR
1996 through 2000 -- 8.42 Billion KWHR

Using a load factor of 75%, the additional load would require an additional 135 MW generating capacity in 1977 plus an additional 1159 MW of generating capacity added in 1985 of which 75% will be to Utah Power and Light's system and 25% to Idaho Power and Light's system.

The figures shown here include only the phosphate ore processing and do not include additional requirements for residential, commercial and other industrial loads in support of the phosphate industry. Another large yet undetermined amount of power will be required for increased byproduct processing and extraction. It seems reasonable with the additional requirements to the additional projected phosphate loads that the total generating capacity requirements could double in respect to the above during the same time periods.

If increased generating capacity is built by Utah Power and Light and Idaho Power Company for supplying the additional phosphate load, consideration must be given to the type and location of such facilities and the impact upon future rates for all utility customers.

A. J. Hadley
Director of Utilities

AJH:WJD:lb

JOB SERVICE

Cecil D. Andrus, Governor STATE OF IDAHO
Glenn W. Nichols, Director DEPARTMENT OF EMPLOYMENT
Box 35
Boise, Idaho 83707

November 10, 1976

RECEIVED
NOV 12 1976
BUREAU OF STATE PLANN
AND COMMUNITY AFFA

Ken Stolz
Natural & Physical Resources Planner
Bureau of State Planning & Community Affairs
Division of Budget, Policy Planning and Coordination
Statehouse
Boise, Idaho 83720

Dear Ken:

The following are comments on the Draft Environmental Impact Statement as requested in your letter of October 19. As you realize it requires substantial effort to evaluate the accuracy of forecasting models, input data, etc. particularly when we were only incidentally involved in the work on the project. So I haven't really attempted to do that. Instead my comments are limited primarily to apparent errors in data or logic that I noticed in only a cursory review of the DEIS.

1. On page 1-282 population data is presented. Revised 1974 and preliminary 1975 data are not incorporated but are available from the Bureau of Vital Statistics.

   These data now have been incorporated in the analyses.

2. On page 1-283 it is implied that there continues to be net outmigration in Southeastern Idaho. However, from 1970 to 1975 no county in the area experienced net outmigration. Net immigration amounted to 2600 in the area during that period. These data are available from the Bureau of Vital Statistics.

   The revised analyses now consider past in- and outmigration.

3. On page 1-283 data is presented indicating that in 1969 10% of the families in the area had income below $3000. The analysis then assumes that that is still the case after the passing of seven years.

   There is no assumption that this is still the case. The text merely cites the 1969 statistic as background.

4. On page 1-392 the text indicates that a population growth multiplier of 2.74 was used. In 1970 there were 2.74 people for every job in the area. However, a number of factors are likely to change that. Migrants moving to the area are likely to have smaller families than the existing population. This has been the experience in Boise and Pocatello. Average family size is declining rapidly. Labor force participation rates are increasing rapidly.

   The population forecasts have been revised.

Sincerely,

Steven T. Seward
Research Analyst

AGRICULTURAL EXPERIMENT STATION
COOPERATIVE EXTENSION SERVICE
RESEARCH AND EDUCATION
OFFICE OF THE DEAN
COLLEGE OF AGRICULTURE

University of Idaho
College of Agriculture
Moscow, Idaho 83843

June 2, 1976

Mr. Shirl C. Boyce, Jr.
Chief, Bureau of State Planning
and Community Affairs
Statehouse
Boise, Idaho 83707

Dear Mr. Boyce:

This letter is in response to the request of John Hough for copies of comments that are to be presented concerning the development of phosphate resources in Southeastern Idaho.

The College of Agriculture will present a statement on the importance of phosphorus for agricultural production. A copy of the preliminary draft of this statement is enclosed.

The College also considered preparing a statement on the potential fluoride problem associated with phosphate processing. Upon reviewing the draft environmental statement, we believe the subject is reasonably well covered and no additional comment is needed.

Sincerely,

Raymond J. Miller
Director and Associate Dean

RJM:ja

Attachment

cc: Dean Mullins
Dr. Milt Small

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THE IMPORTANCE OF PHOSPHATE FERTILIZER TO IDAHO'S AGRICULTURE

(Preliminary Draft of the Statement to be Presented Before the Hearing On the Environmental Impact of Phosphate Mining in Southeastern Idaho)

June 14, 1976

Boise, Idaho

Phosphorus is absolutely essential for all living organisms. It is necesary for the storage and transfer of energy in living cells. It is an important part of cell membranes as well as the cell nucleus which contains the genetic information controlling all cell functions including reproduction. In the absence of phosphorus life ceases to exist.

Green plants, upon which all organisms including man depend for food, get phosphorus from the soil. Although soils may contain substantial quantities of phosphorus (from a few hundred pounds to several thousand pounds per acre) much of it is unavailable to growing plants, yet growing plants must have this element in large quantities if maximum production is to be achieved. Some crops can remove in excess of 100 pounds of this element (expressed as oxide P_2O_5) in a single growing season. With this high rate of use and its restricted availability in the soil, low phosphorus levels frequently restrict plant growth. In fact, phosphorus is the second most limiting nutrient element for plant growth next to nitrogen. The same yield of crop plants is not possible without the use of phosphate fertilizers to supplement phosphorus supplied by the soil. Without periodic supplementation of the soil with phosphate fertilizer, yield of many crops declines sharply and production on these sites becomes uneconomical and impractical.

Idaho's agriculture is no exception in its need for phosphate fertilizer to maintain high crop yields. The plant available phosphorus levels in most Idaho soils and consequently their productivity, have been maintained by frequent application of phosphate fertilizer. However, should phosphorus not be applied due to a shortage of this resource for any reason, productivity will decline sharply in only a few growing seasons. This is particularly true of those crops which require a high level of readily available soil phosphorus such as potatoes, alfalfa, and sugar beets. Without phosphate fertilizer, production of these crops would readily become impractical, resulting in enormous economic losses to the State of Idaho. Yields of crops such as wheat and beans with somewhat lower phosphorus requirement would decline less readily, but in time would be severely affected by the lack of phosphate fertilizer.

The following data are taken from selected fertilizer experiments conducted in Idaho that illustrate the kind of yield losses that have been made when phosphate fertilizers are omitted for only one season.

EXPERIMENTAL LOCATION	YIELD REDUCTION (%)
Potatoes	
70P1	23
70P3	12
70P6	19
70P10	10
70P12	0
69P7	7
69P10	27
69T15	0
68P3	16
68P8	13
68P10	3
72A	25
Alfalfa	
69A1	12
69A2	4
69A3	19
Sweet Corn	
71S1	50

These data illustrate the short term impact of not using phosphate fertilizer on crop yields in Idaho. Yield reduction in several of these cases would make production uneconomical and the long term effects would be even lower yields. Therefore, it is imperative that Idaho's farmers have an adequate supply of phosphate fertilizer available to them. The availability of phosphate fertilizer would be affected by the availability of rock phosphate from which it is made.

University of Idaho
College of Agriculture
Department of
Agricultural Economics
Richard W. Schermerhorn, Head
Moscow, Idaho 83843
Phone (208) 885-6262

October 1, 1976

U.S. Geological Center
National Center
Reston, Virginia 22070

Dear Sirs:

The following are some of the major questions we feel ought to be addressed in the Phosphate Mining Environmental Impact statement for southeastern Idaho.

1) What will be the impact on the supply of labor in the area--i.e. will the demand for labor increase so much that wages are bid sufficiently high that firms already operating in the area will be forced out of business?

2) If new employees are brought to the area, what will be their demand for social services (e.g. fire, schools, roads, police protection)? How will these services be financed? Who will bear the cost of providing these services?

3) What mitigating actions can be undertaken to reduce the impact on such things as: (a) reduced forage associated with the mines and floride pollution, or (b) reduced quantity or quality of useable water? How much will these measures cost? Who will bear these costs?

4) What is the short and long run economic demand for phosphate? If the study area is not mined will the price of phosphate increase or will mining simply shift to one of several other feasible areas in or outside the U.S.? What impact will the anticipated mining activity have on the supply and subsequent price for phosphate? What impact would a phosphate price rise have on Idaho agriculture and on the related processing industries?

5) What impact would the anticipated changes in the communities involved have on the social stability of the area?

1. SICOG believes that there could likely be some labor pirating relating to construction activities. The extent cannot be determined at this time. It is not likely that any firms in the area will be forced out of business.

2. The demand for social services are discussed in the FES. The financing of such services and the allocation of costs are the responsibilities of Federal, State, and local agencies and are beyond the scope of an EIS.

3. The mining companies are aware of rehabilitation requirements on waste dumps and other disturbed areas. This will offset some of the forage losses. The remaining forage losses will have to be accommodated on a case by case basis by the involved mining company. Involved land managing agencies will also be involved where grazing privileges are affected. Fluoride pollution mitigation is addressed on Page 1-440 of the DES. Continuation of various monitoring programs will help eliminate some of the concerns raised by this question.

4. This final statement includes analysis of a "more probable level of development" and new independent marked demand forecasts and projections which generally respond to these questions in so far as they are germaine to fullfilling requirements of the NEPA.

5. The social stability of the area undoubtedly will change, as discussed in the text.

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6) If federal "in lieu" payments are not returned to the counties in proportion to revenues generated, how will the communities affected finance anticipated social costs? What impact(s) will this have on the use of privately owned resources in the area?

7) What will be the impact on area water supplies? What impact will this have on local agriculture, local communities, and on instream water uses such as waste dilution and hydropower generation?

8) Where will the electric power to operate mining and processing facilities come from? Will new thermal power plants be required, with future as well as present power users expected to pay these costs?

We recognize that answers to most of the questions above are not available at the present time. We feel that they can and should be answered, however, before the impact of the mining activity from a social point of view be evaluated.

Respectfully yours,

E. L. Michalson
Professor

E. Bruce Godfrey
Associate Professor

Joel R. Hamilton
Associate Professor

John E. Carlson
Associate Professor

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6. See response to comment number 2.

7. Inasmuch as the flow--except for part of the flood flow--of both the Blackfoot and Bear River basins is fully adjucated, any new large use of water would of necessity divert water from existing uses. This suggests that water rights for expansion of the phosphate industry would have to be acquired from willing sellers. Any unappropriated water in these basins would be allocated according to the priorities discussed on page 1-155 of the DES.

8. Power will probably come from thermal sources which may, because of water availability, be located in Idaho.

CECIL D. ANDRUS
Governor

JOHN McCULLEN
Director

Idaho Office on Aging

CAPITAL ANNEX NO. 3 — 506 N. Fifth
Mailing Address: STATEHOUSE
BOISE, IDAHO 83720
Phone (208) 384-3833

June 1, 1976

Ken Stolz
Division of Budget, Policy Planning
and Coordination
Statehouse Mail
Boise, Idaho 83720

Dear Mr. Stolz:

The Idaho Office on Aging has reviewed the environmental impact study of Southeast Idaho and feel that additional factors should be considered.

A. The additional impact of phosphate mining on community and supportive services will accelerate taxes and cost of living factors faster than normal inflationary factors.

1 B. Will additional energy resources be available to meet the extra demands for mining?

B1. Will the elderly, living on fixed incomes, be able to pay the additional cost for energy?

"A Growth Management Case Study," (mining and construction boom), Sweetwater County, Wyoming, prepared by Rocky Mountain Energy Company of Denver, 1974, has shown that the socio-economic impact on a community and its supportive services developed twice as fast as planned. The local government in Rock Springs, Wyoming, initially spent their time reacting to crises as a direct result of the increased demands the families of additional mining personnel put on the existing community services. We feel that more serious consideration must be given to the socio-economic impact on small communities and especially those people living on fixed incomes.

Sincerely,

Ed Wimmer
Data Specialist

EW:tg

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1. Additional discussions on these factors have been added to the FES.

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, IDAHO 83706

STATE MUSEUM

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BUREAU OF STATE PLANNING
AND COMMUNITY AFFAIRS

November 17, 1976

Mr. R. Kenneth Stolz
Natural and Physical Resources Planner
Statehouse
Boise, Idaho

Dear Ken:

Thank you for the opportunity to respond to comments upon the environmental statement concerning phosphate resources. Comment number 41, objecting to preservation of the Oregon Trail and Lander Road, is a perfectly adequate statement of a commentator's reaction, but the impact statement provides only what federal statutes and regulations (36 CFR 800.9) require: if the statement lacked this kind of provision, the Advisory Council for Historic Preservation simply would reject it. Regardless of whatever our commentators might prefer, we hardly can suggest modifications that will violate federal statutes and regulations to which the statement must conform.

Although some historical and archaeological surveys have been made in the broad study area, most cultural resources there remain uninvestigated. Recent archaeological sampling indicates that no part may be dismissed as useless to investigate. If the statement is going to be approved by appropriate federal authorities, provision must be included for this survey.

Sincerely yours,

Merle

Merle W. Wells
State Historic Preservation Officer

dm

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IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, IDAHO 83705

November 18, 1976

STATE MUSEUM

Mr. R. Kenneth Stolz
Natural and Physical Resources Planner
Statehouse
Boise, Idaho 83720

Dear Mr. Stolz:

Thank you for the opportunity to comment on the draft EIS for the development of the phosphate resources in southeastern Idaho. My comments concern the archaeological properties in the area.

As we were consulted prior to the writing of the draft EIS, generally, the interests of our office are adequately addressed in this document. The draft EIS makes a strong commitment for the protection of archaeological and historical properties that may be endangered by phosphate mining and related developments. The mitigation proposals outlined in the draft EIS (I-453-455) are adequate and reflect the Federal Government's regulations (36CFR800) for the protection of archaeological and historical properties. I would like to point out that the required procedures (inventory surveys, test excavations, consultation with SHPO, etc.) require time and appropriate weather. This work should begin as soon as possible.

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On pages I-415-416 of the draft EIS is the discussion of the adverse impacts to archaeological and historical sites from phosphate mining. Among other things it states (I-46):

> The major adverse impact would be the population increase caused by the introduction of the phosphate mining unit. A large number of incoming people could cause major regional impacts on the unidentified as well as established cultural resources. For example, as public use of a region increases, so will vandalism on the cultural resources of the area.

While this is true, I am not sure that it is the major adverse impact. In my opinion, the mining and associated roads and processing plants will cause more significant impacts. The lead sentence in the above quoted paragraph might be changed to: "A major adverse impact . . .".

The discussion of the measures to mitigate the impacts to archaeological sites from the construction of transportation and utility systems should state on page 3-38 that inventory surveys and test excavations for evaluation purposes will proceed in advance of construction. The text of the draft EIS states that only test excavations will be conducted.

I want to emphasize the importance of the archaeological properties in southeastern Idaho. From a geographical perspective southeastern Idaho has been a transportation corridor linking the Plains, Rocky Mountains, Snake River Valley, and the Great Basin for thousands of years. Important questions concerning the interactions and culture history of the prehistoric peoples living in these physiographic zones can be answered only through a scientific study of the archaeological properties still in existence. The archaeological sites in this region are invaluable for this reason.

Sincerely,

Thomas J. Green
Acting State Archaeologist

gt

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

State Engineer's Office

BARRETT BUILDING CHEYENNE, WYOMING 82002

June 1, 1976

Director, U.S.G.S.
National Center
Mail Stop 108
Reston, Virginia 22092

Dear Sir:

The Draft Environmental Impact Statement prepared on development of phosphate resources in southeastern Idaho recently received by this office has been reviewed. Although neither this agency nor any other jurisdiction within the State of Wyoming was included in the group of those activities from which comments were solicited, the subject matter is of interest particularly to the communities and counties along the western border of the state.

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Since, as stated on page 1-95, little water is needed or used at present in the mining of phosphate rock, it is concluded that this will have an effect only of a local nature and will not involve flows of the major streams. With respect to projected increase in need for water for processing the phosphate ore, which could be as much as 30,000 acre-feet per year in the Soda Springs Area, the supply is anticipated to be procured from ground water as the waters of the Bear River Basin apportioned to Idaho by the Bear River Compact, ratified in 1955, have essentially all been allocated as noted on page 1-155. It should be pointed out, however, that if use of this water reduced the flows of Soda Creek, this would reduce supplies to the Bear River and could affect available supplies in the Bear River System. 1

It is noted on page 1-297 that the population projection for Lincoln County, Wyoming is predicted to progressively decline from the 1970 census figure of 8640 to 2131 by the year 2020. The 1974 population estimate was 9300 and it is suggested that this part of the statement be reviewed and revised to conform to what might more reasonably be anticipated. Due to the close proximity of Lincoln County to the proposed development and its potential to supply needed services, materials, power and related transportation support, it does not appear realistic that the county would experience a 75 per cent population decline by the year 2020. 2

Sincerely yours,

George L. Christopulos

GEORGE L. CHRISTOPULOS
State Engineer

GLC/CRL/llp
cc: State Planning Coordinator

1. The statement in the text has been amplified.

2. The predicted population decline for Lincoln County was obtained from an unpublished report to the Forest Service by E. L. Laible and R. B. Maughan of Idaho State University, titled "Sociological Overview - Phosphate Planning Chief, Caribou National Forest". However, in view of the recent coal developments in the Kemmerer area, the proposed decline does not now appear realistic. The Task Force continues to believe that the impacts of the phosphate development in Southeastern Idaho will be limited.

THE STATE OF WYOMING

EO HERSCHLER
GOVERNOR

Department of Environmental Quality

Administration

Hathaway Building CHEYENNE, WYOMING 82002 Telephone 307-777-7391

June 9, 1976

Director, U. S. Geological Survey
U.S. Department of Interior
Geological Survey (Lead Bureau)
Bureau of Land Management
Room 1618 Building 25
Denver Federal Center
Denver, CO 80225

Dear Sir:

We have circulated the draft environmental impact statement on Development of Phosphate Resources in Southeastern Idaho to appropriate Divisions in our Agency for comment.

The attached memorandum comments are offered for your consideration.

Very truly yours,

Robert E. Sundin
Director

RES:ak
cc: State Planning Coordinators Office
Enclosures

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MEMORANDUM

TO: Robert E. Sundin
Director
Department of Environmental Quality

THROUGH: George Kaminski
Public Information Officer
Department of Environmental Quality

FROM: Woody Russell
Air Quality Engineer
Air Quality Division

SUBJECT: Air Quality Evaluation of the EIS for the Development of Phosphate Resources in Southeastern Idaho

DATE: May 28, 1976

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The EIS stated the phosphate development would appear to have little socio-economic impact on Wyoming. However, nothing was said as to the impact such development could have on Wyoming's ambient air quality.

It should be pointed out that the Wyoming regulation for fluorides is more stringent than Idaho's. Furthermore, the western portion of Wyoming has the potential of being designated as Class I in regards to Significant Air Quality Deterioration.

With the above in mind, those agencies responsible for developing the EIS should attempt to project the maximum impact the phosphate development could have on the ambient air quality in Wyoming. Particular emphasis should be expended on the determination of fluoride emissions from phosphate mining and processing, the impact such maximum projected emissions will have on the ambient air quality, on vegetation, including conifers, and on the domestic livestock and wildlife. 1

Because of the close proximity, (approximately 15 miles), to the Wyoming border, a thorough analysis of the impact this potential development will have on Wyoming must be considered.

1. The differences in the Wyoming and Idaho regulations for fluoride are noted, particularly in regard to those in Wyoming being more stringent. However, in view of the distances involved (24 km or 15 mi) to the Wyoming border, the impact of fluoride (and other) emissions will be minimal as shown in the computation.

Assuming the worst case wind/stability conditions for long range transport ("E" stability and 4 m/s), and using minimum plume height of 10 meters, the actual concentration of 24 km would be 4.3 x 10^{-7} of the emission rate.

Therefore the maximum ground-level concentration in Wyoming would be less than one-millionth that of the maximum source value in Idaho 15 miles away.

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

LAND QUALITY DIVISION

STATE OFFICE BUILDING TELEPHONE 307-777-7756 CHEYENNE, WYOMING 82002

MEMORANDUM

TO: Robert E. Sundin, Director - Dept. of Environmental Quality

FROM: Gary Beach, Soil Scientist - Land Quality Division

DATE: June 3, 1976

SUBJECT: Comments on Development of Phosphate Resources in Southeastern Idaho

This Division has no comments.

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HATHAWAY BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

May 28, 1976

MEMORANDUM

TO: Robert E. Sundin, Director, Department of Environmental Quality

FROM: David W. Hill, Environmental Engineer, Water Quality Division

SUBJECT: Draft Copy, Development of Phosphate Resources in Southeastern Idaho, prepared by USGS, BLM, and the Forest Service.

It appears that all water quality problems associated with this project will occur in Idaho and therefore does not require comments from our Division.

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cc: Planning Coordinators Office

Calvin L. Rampton
Governor

Burton L. Carlson
State Planning
Coordinator

STATE OF UTAH
Office of the
STATE PLANNING COORDINATOR
118 State Capitol
Salt Lake City, Utah 84114
(801) 533-5245

June 29, 1975

Director
U.S. Geological Survey
Department of the Interior
Washington, D.C. 20555

Dear Sir:

The Utah State Environmental Coordinating Committee has reviewed the Draft Environmental Impact Statement for the Development of Phosphate Resources in Southeastern Idaho and forwards the attached comments for your consideration.

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Sincerely,

James Edwin Kee
State Planning Coordinator

JEK/jn

Enclosure

ENVIRONMENTAL IMPACT STATEMENT:

DEVELOPMENT OF FOURTEEN MINEMOUTH PLANTS IN U.S., 1990

Comments; Utah Division of Water Resources.

This is a voluminous and comprehensive piece of work. Inasmuch as it encompasses a spectrum of physical and socio-economic conditions in a study area of over one million acres it can be easily understood how difficult it is to summarize the findings into a few simple and coherent statements.

Two general comments;

1.Some situations do not lend themselves to the simplification and the clarification which is the principal objective of a summary statement. This is especially true in this case,where such a broad range of conditions prevail and where the impacts vary so widely. We would suggest that the summary statement be presented on a case by case basis,with the degree and nature of the impacts clearly spelled out. It would also add prospective if the factual basis for evaluating the impact be described in enough detail so that the reader could evaluate the degree of extrapolation which underpins the conclusions.

By arraying the projects in this manner,it would seem that we could get an initial picture of the relative merits of specific mining proposals in terms of "least environmental costs".

1 It is not clear throughout the discussion of surface water runoff and sedimentation if the estimates of water and sediment yield assume any kind of control measures in place. If the estimates include application of the best known or available control measures, it should be so stated-,or whatever.

Water Flow-Water Quality.

As described in the report,only the Swan Lake Gulch,Bloomington Canyon and (possibly) Georgetown Canyon drainages,all Bear River tributaries,have developments which would have impacts directly affecting Utah. Estimated net impacts,derive from the report are listed below:

	Water Quantity	Water Quality		
Name		Sediment	Chemical	Biota
Bloomington	Slight	Slight	Moderate	
Swan Lake Gulch	Slight	Moderate	Slight	---
Georgetown	Slight	Mod.-High	Slight	Mod.-High

2 It does not appear that the mines and plants located in the Bear River drainage will have any great effect on the flow of the streams at the Utah border,except for their use of water under Idaho's entitlement under the revised compact. Facilities now in existance or in planning along the Bear Rive will adequately contain any increased sediment yield.

1. Because only limited hydrologic data are available for the area, estimates of rates and volumes of surface water and sediment movement prior to mining area based on flow characteristics of nearby streams, estimated rainfall, estimated evapotranspiration, estimated percolation rates, types of vegetation, data from maps, and channel geometry were made. These estimated rates of runoff and sedimentation were then increased, assuming that compaction of fills, removal of vegetation, steepening of dumps and pits, and other activities associated with mining, would reduce and better data become available. Estimates and control-measure design can be upgraded.

2. These comments have been incorporated into the text.

*
USGS RSTN

EVANS SLC
9-29-76 3:45

DIRECTOR
U. S. GEOLOGICAL SURVEY
NATIONAL CENTER, MAIL STOP 108
RESTON, VIRGINIA 22092

DEAR SIR:

PURSUANT TO THE PROVISIONS OF THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969, I REQUEST THAT THE FOLLOWING WRITTEN COMMENTS BE ACCEPTED FOR CONSIDERATION IN THE PREPARATION OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT COVERING THE DEVELOPMENT OF PHOSPHATE RESOURCES IN SOUTHEASTERN IDAHO, AND THE LAND-USE PLAN FOR THE DIAMOND CREEK PLANNING UNIT PORTION OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT.

I SUBMIT THESE COMMENTS BECAUSE THE EFFECTS OF RESTRICTIONS AND PRODUCTIVE MANAGEMENT LEVELS SELDOM END AT THE BORDERS OF A STATE, OR ARE SELDOM CONFINED TO A GIVEN REGION. IT HAS BEEN CALLED TO MY ATTENTION THAT A MANUFACTURING AND PROCESSING TIE EXISTS BETWEEN THE PHOSPHATE MINING INDUSTRY IN SOUTHEASTERN IDAHO AND A MAJOR RESOURCE DEVELOPMENT INDUSTRY IN UTAH BY ALUMET.

No response required.

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ALUMET IS A JOINT VENTURE BETWEEN NATIONAL STEEL CORPORATION, SOUTHWIRE COMPANY AND EARTH SCIENCES, INC. THIS JOINT VENTURE HAS DEVELOPED AND REFINED A PROCESS FOR PRODUCTION OF SMELTER-GRADE ALUMINA FROM A MINERAL CALLED ALUNITE. A PILOT PLANT HAS BEEN IN OPERATION FOR MANY MONTHS IN GOLDEN, COLORADO, TO PROVE THE ECONOMICS OF THE PROCESS.

AS LONG AGO AS 1970, THE NATIONAL MATERIALS ADVISORY BOARD EXPRESSED CONCERN THAT SOME 90 PERCENT OF THE NATION'S BAUXITE WAS IMPORTED FROM FOREIGN SOURCES AND THAT THE REMAINING 10 PERCENT, DOMESTIC BAUXITE LOCATED PRIMARILY IN ARKANSAS, WOULD SOON BE DEPLETED. THE OVERSEAS BAUXITE PRODUCERS APPEAR TO BE ORGANIZING AND HAVE FORMED THE INTERNATIONAL BAUXITE ASSOCIATION. ADDITIONALLY, THE PRICE FOR FOREIGN BAUXITE HAS BEEN QUADRUPLED DURING THE PAST TWO YEARS BY THE IMPOSITION OF NEW TAXES.

THE BOARD'S REPORT NOTED THAT ALUNITE HAD LITTLE POTENTIAL OF BEING A MAJOR SOURCE OF RAW MATERIAL OF ALUMINUM IN THIS COUNTRY BECAUSE THERE WERE NO KNOWN DEPOSITS OF SUFFICIENT CONCENTRATION OR VOLUME. ABOUT THAT TIME THE ALUMET CONSORTIUM IDENTIFIED A LARGE AREA OF ALUNITIZED ROCK IN SOUTHWESTERN UTAH. THAT DEPOSIT HAS NOW BEEN ESTIMATED AT ABOUT 700 MILLION TONS OF ALUNITE ORE, AND MAY BE THE LARGEST SUCH DEPOSIT IN THE WORLD.

THE URGENCY FOR DEVELOPING ALTERNATE DOMESTIC SOURCES OF ALUMINA WAS EMPHASIZED IN A US GEOLOGICAL SURVEY REPORT THAT WARNED FOREIGN MINERAL CARTELS ARE FORMING WHICH COULD PUT THE NATION THROUGH ANOTHER WRENCHING PERIOD OF SHORTAGES AND PRICE INCREASES. ADDITIONALLY, AMERICAN FIRMS HAVE EXPERIENCED NATIONALIZATION OF THEIR OVERSEAS INVESTMENTS, ACCORDING TO THE USGS REPORT.

UTAH'S DEVELOPING ALUNITE INDUSTRY MAY PLAY AN IMPORTANT ROLE IN THE PROGRAM TO MAKE THE NATION LESS VULNERABLE TO FOREIGN PRICING AND POLITICAL MANEUVERS. ALUMINUM IS SECOND ONLY TO STEEL IN OUR NATIONAL CONSUMPTION OF METALS.

ALUMET PLANS AN INVESTMENT OF SOME $400 MILLION IN THE UTAH MINE AND MILL FACILITIES. DURING PLANT CONSTRUCTION ABOUT 1,800 WORKERS WILL BE EMPLOYED OVER A 42-MONTH CONSTRUCTION SCHEDULE. WITH THE PLANT IN OPERATION, ABOUT 1,000 WORKERS WILL BE UTILIZED. THIS REPRESENTS A SIZEABLE CONTRIBUTION TO THE UTAH ECONOMIC BASE.

ONE OF SEVERAL BY-PRODUCTS OF THE ALUMET PROCESS WILL BE SULFURIC ACID. THE PRESENT PLAN IS TO COMBINE THIS PRODUCT WITH PHOSPHATE ROCK, TO BE MINED IN THE DIAMOND CREEK ARE, FOR THE PRODUCTION OF ABOUT 550,000 TONS OF TRIPLE-SUPERPHOSPHATE FERTILIZER ANNUALLY. THE COMMERCIAL UTILIZATION OF THIS BY-PRODUCT, ALONG WITH THE PRODUCTION OF POTASH FERTILIZER, MAKES A SUBSTANTIAL CONTRIBUTION TO THE ECONOMIC FEASIBILITY OF THE ALUMET PROCESS. ADDITIONALLY, THE PROCESS IS ENVIRONMENTALLY SOUND. TAILINGS FROM THE ALUMET PROCESS WILL BE CLEAN, CRYSTALLINE QUARTZ SAND, THUS ELIMINATING A MAJOR DISPOSAL PROBLEM ASSOCIATED WITH OTHER ALUMINA SOURCE MATERIALS, INCLUDING BAUXITE.

IT IS MY UNDERSTANDING THAT SEVERAL GROUPS INTERESTED IN ENVIRONMENTAL MATTERS PERTAINING TO THE SOUTHEASTERN IDAHO PHOSPHATE PRODUCING AREA, ARE ASKING FOR A PRODUCTION MANAGEMENT LEVEL TO BE MAINTAINED AT, OR SLIGHTLY ABOVE THE PRESENT LEVEL. WITH THE INDUSTRY NOW PRODUCING ABOUT 5.6 MILLION TONS OF PHOSPHATE ROCK ANNUALLY, AND WITH ALUMET PLANNING TO PRODUCE AN ADDITIONAL ONE MILLION TONS ANNUALLY, THAT MANAGEMENT LEVEL WOULD PRECLUDE FURTHER DEVELOPMENT OF PHOSPHATE RESOURCES.

MY GREAT CONCERN IS THAT IF ALUMET IS PREVENTED FROM DEVELOPING THEIR MINING PLAN IN THE DIAMOND CREEK AREA, THE ECONOMICS OF THE ALUNITE DEVELOPMENT PROJECT IN UTAH WILL BE IN SERIOUS JEOPARDY. THE DOWNGRADING OF ECONOMIC FEASIBILITY OF THE ALUMET PROCESS COULD SERIOUSLY IMPEDE A CRITICAL PROGRAM TO DEVELOP A STABLE DOMESTIC SOURCE FOR AN IMPORTANT RAW MATERIAL. CERTAINLY, THIS KIND OF LIMITATION ON THE MINING OF PHOSPHATE ORE, AND THE EFFECTS OF THAT LIMITATION, WOULD NOT BE IN THE NATIONAL INTEREST, NOR IN THE INTERESTS OF IDAHO AND UTAH.

I AM INCREASINGLY ALARMED AT THE STEPS WE ARE TAKING TO STIFLE OUR NATIONAL PRODUCTIVITY AND OUR ABILITY TO PRODUCE GOODS AND SERVICES. IT HAS BECOME INCREASINGLY CLEAR TO ME THAT THE PROPER BALANCE BETWEEN ENVIRONMENTAL CONCERNS AND THE EXTRACTIVE, PROCESSING AND MANUFACTURING INVOLVED IN RESOURCE DEVELOPMENT CAN BE ACHIEVED. BUT WE MUST ADDRESS THESE PROBLEMS WITH DETERMINATION, SIDESTEPPING THE EMOTIONALISM AND IN THE SPIRIT OF DECISIONS FOR THE COMMON GOOD.

I WOULD URGE THAT SERIOUS CONSIDERATION BE GIVEN TO ESTABLISHING A MANAGEMENT LEVEL WHICH WILL ALLOW THE NECESSARY GROWTH FOR CONTINUING TO ACHIEVE OUR NATIONAL GOALS, AND WHICH WILL ALLOW US TO MAINTAIN OUR QUALITY OF LIFE. I URGE THAT CONSIDERATION BE GIVEN TO THE CONSEQUENCES OF A PHOSPHATE MANAGEMENT LEVEL THAT WOULD PRECLUDE THE ALUMET DEVELOPMENT WITHIN THE DIAMOND CREEK PLANNING UNIT.

MILTON L. WEILENMANN
EXECUTIVE DIRECTOR
UTAH STATE DEPARTMENT OF DEVELOPMENT SERVICES
STATE CAPITOL BUILDING
SALT LAKE CITY, UTAH 84114

CL

(303) 278-3033

ALUMET

nsa

607 10th STREET, SUITE 203 • P. O. BOX 630 • GOLDEN, COLORADO 80401

September 27, 1976

Mr. Terry Narten
EIS - Phosphate Development
Southeastern Idaho
USGS
760 National Center
Reston, Virginia 22092

Dear Mr. Narten:

The attached statement of comments is a summary of ideas and concerns from Alumet regarding both their specific Diamond Creek and Swan Lake Gulch proposals and the general tenor of the Draft EIS on Phosphate Development in Southeast Idaho. The statement of comments is not meant to be exhaustive. Instead, it is designed to summarize vast quantities of data and analyses, and plans and specifications previously submitted to the Task Force by Alumet.

Because Alumet recognized that onsite data were needed for adequate environmental analysis, we conducted specific studies, results of which are contained in three major documents: Hydrology; Air Quality & Meteorological Impact Assessment; and a comprehensive Environmental Impact Assessment.

The specific data and analyses contained in the documents include but are not limited to:

1. Meteorological monitoring data - 3 stations.
2. Air quality monitoring data - 3 stations.
3. Stream discharge data - 13 stations.
4. Groundwater wells - 6
5. Other wells - 102
6. Ground and Surface Water Quality - 17 stations.
7. Pump tests and pit dewatering analysis.
8. Water table delineation.

9. Electrical resistivity survey.
10. Vegetation mapping.
11. Wildlife monitoring.
    - fish shocking
    - benthic community sampling
    - small mammal trapping
12. Study of settleability of spoil material.
13. Leachate study of spoil and other materials.
14. Design of complete runoff control, retention, and recycling system.
15. Complete reclamation/revegetation plan.
16. Analysis of air quality impacts.
17. Analysis of alternate and future processes.

These data and analyses form the core of Alumet's response to the EIS. Further comments have been made orally and in writing, including a Mine and Reclamation Plan revised to minimize or prevent environmental impacts and a complete Drainage Control Plan.

The specific comments contained in the attached statement address themselves primarily to five major issues, and particularly to statements and assumptions not directly discussed in any other document. The five major issues are:

1. General comments about scholarship, including the use, misuse, or nonuse of units for air and water quality, enumeration of wildlife, and generalization without factual basis;

2. The rate of growth in the industry;

3. The presentation of raw data, especially the failure to distinguish between "hard" and "soft" data;

4. Conclusions and assessment of impacts, particularly with reference to existing standards, laws, and permit procedures; and also in reference to the making of definite quantitative predictions based on qualitative data; and

5. The chapters on mitigation, unavoidable impacts, short term vs long term, and irreversible commitments of resources.

All in all, the Draft EIS is a good draft for a regional statement. The inclusion of data and analyses conducted by Alumet will allow an excellent Final EIS to be prepared and hopefully permit the issuance of permits on a rational basis, accompanied by legitimate conditions and stipulations for minimizing environmental impacts.

If there are any questions concerning these or any other submissions by Alumet, or if there is any assistance we can provide, please do not hesitate to call me at (303) 279-7641.

Very truly yours,

ALUMET

J. H. Viellenave
Environmental Services Div.
Project Manager

JHV/kc/270E
Attachment

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RESPONSES TO EIS - Development of Phosphate

Resources in Southeastern Idaho

The comments contained in this statement arose from the research and study by Alumet regarding its proposed Diamond Creek operation, and an intensive study of the Draft EIS. All criticism is meant to be constructive; the draft is a useful document, which, considering its regional scope and lack of data is excellent upon which to base a Final EIS.

The comments herein are divided into five major categories:

1. General comments;
2. Industry growth;
3. Data presentation;
4. Judgements and conclusions; and
5. Assessment of mitigation measures and alternatives.

1. General Comments

While the Task Force (IATF) has had the unenviable task of preparing a regional EIS on the basis of an imcomplete, unvalidated, and debatable data base, vast quantities of data have been and are available. Much was not available until after the Draft was prepared. These additional data should allow substantial improvements in analyses in the Final EIS. Alumet has submitted three documents: Hydrology; Air Quality and Meteorological Impact Assessment; and a Comprehensive Environmental Impact Assessment. All contain large quantities of raw data collected onsite in the areas of concern.

Partially because of the lack of complete data, the IATF has had the habit of expressing judgements based on assumptions which either are not valid, or are questionable. Where such assumptions back generalizations and conclusions, particularly in the impact chapters, qualifications to this effect are seldom, if ever, seen. In order to maximize the scholarliness of the document, all such data deficient generalizations should be so qualified. The supporting data already submitted by Alumet, and a better understanding of our proposal by the Task Force should facilitate a more rational assessment of the impacts of the Alumet projects.

1 The presentation of data left a good deal to be desired; on numerous occasions, incorrect units were used, and different units on the same page left a misleading impression. For example, the table at the bottom of page 1-164 has no units; paragraph 1 at the top of page 1-168 expresses fluoride concentrations, first in ppm, then in g/m^3, is $\mu g/m^3$ more appropriate?

1. The incorrect units have been corrected.

Others include:

2 Page 1-126 - no units for sediment, turbidity, or discharge.

3 Page 1-132 - the units are mixed on the table in the middle of the page, ppm (English) and $\mu g/l$, giving a misimpression.

4 Page 1-138 - Cd-Zn expressed as g/l; is $\mu g/l$ more appropriate?

5 Page 1-144 - The dissolved solids and conductance under 8/22/74 do not appear correct.

2. Industry Growth

Under the section on industry growth, a major question is asked as to the actual rate of expansion in the western fields. While the IATF estimates are around 1% (p 1-29), Alumet believes, and is supported by industry analysts, that the actual compounded rate of growth may be closer to 3%. The growth is not likely to be completely uniform, but over a 25 year period should approximate that level. The most important factor to be recognized is that the projections made by industry for the EIS are not realistic in toto, nor were they meant to be. Clearly, industry saw the moratorium as a threat to long term planning and growth, and responded in a way which suggested a much higher rate of growth in aggregate than would be possible in the market place. Their 6 public statements validate this argument. Industry desires do not dictate production; the market does. The market will certainly grow as fast as population; U.S. population is growing at 1.8% annually, and world population at approximately 3%. The production of phosphates is related almost linearly with the demand for food.

3. Data Presentation

Various misestimates and errors occurred in the presentation of data concerning the proposed Alumet operations. Four major areas of concern are listed herein: a) proposed action, including utilities; b) meteorology and air quality; c) hydrology; and d) water quality.

a) Proposed action

7 Page 1-7: Proposed acreage in table is incorrect, total should be 1200 ac.; footnote is also wrong. Without tailings ponds, the total disturbed area for the plant will be 550 acres.

2. The units are listed prior to the tabulations.

3. This is an unfortunate selection of units which we decided not to change at this time. We did not use "ppb" (part per billion) as a substitute for micrograms per liter because of an ambiguity in some user's understanding of "ppb".

4. The units have been corrected in the table.

5. The conductance was in error and has been corrected.

6. An analyses of impacts at a lesser, more probable level has been incorporated into the FES.

7. The appropriate changes have been made.

8 Page 1-10: Table 1-2 under Alumet shows 1588 acres to settling ponds; maximum should be 650 acres. Spoil dump will be 300 acres.

9 Page 1-11: Footnote 10 - should read one pond possible at 650 acres, 32 year life.

10 Page 1-340: Line 1 should read ". . . ponds which will alter 650 acres . . ."

11 Page 1-387: Line 1 should read ". . . by 650 acres." Line 2 should read "only 112 acres instead of 762 acres."

12 Page 1-489: Consumption of resources must be revised to reflect real assumptions; see below.

13 Page 3-10: last para; Alumet proposes to use NO natural gas, and install no pipeline.

14 Page 3-35: Table 3-1, strike reference to gas pipeline.

15 Pages 4-1 through 4-9: Mining plans, acreages affected, and timing are revised and revisions have been submitted to the Task Force.

Page 4-25: The acreages disturbed are incorrect; see subsequent submissions of EIA, Hydrology, and Air Quality Study.

POWER & WATER CONSUMPTION

16 Page 4-26: last para., "1670 gpm/1000 ft panel" should be altered to read "1000 gpm per 3000 ft panel". No discharge of this water will occur.

17 Page 4-43: para. 4, electrical consumption is wrong; should read "About 70,522,000 kwh of electricity (9.53 MW), . . . "

18 Page 4-67: para. 2, should read "No power will be required to operate the proposed conveyor."

b) Meteorology and Air Quality

19 Pages 1-30 through 1-45: This entire section should be revised in light of the Air Quality and Meteorological Impact Assessment submitted to the Task Force.

Pages 1-157 through 1-174: These should be revised in light of the above.

8 to 12. The appropriate changes have been made.

13. All references to the natural gas pipeline originally proposed by Alumet have been deleted.

14. The appropriate changes have been made.

15. The appropriate changes have been made.

16. Statement has been deleted.

17. Based on the latest updated information from Alumet, total electrical consumption to the year 2000 would be 2.138 billion kilowatt hours. This difference occurred because the DEIS computations did not include calcining electrical consumption.

18. This is true after the conveyor has been loaded. Power will be required to load the conveyor belt, however.

19. Revision of climate for the mining area on the basis of four months of data at three monitoring sites as presented in "Air Quality and Meteorological Impact Assessment" appears unwarranted. The limited data in the report tend to confirm the statement as written; appropriate additions have been made in the text.

20. Page 1-164: Table at bottom of page has no units.

21. Page 1-168: Para. 1_4 last lines, concentrations are incorrectly listed in g/m^3; $\mu g/m^3$ is correct.

22. Page 4-28: NO_2 emissions will be zero (0), not 710 lbs/day.

c) Hydrology

23. Pages 1-95 through 1-156: Revise all areas related to Diamond Creek to reflect submissions by Alumet.

24. Page 1-111: Para. 3, re groundwater quality problems at Diamond Creek. No evidence is presented, statement should be deleted.

25. Page 4-11: Para. 4, landtype 14, re shallow groundwater table; see Hydrology study and well logs submitted by Alumet. Water table deeper than 30 feet.

Pages 4-26 and 4-27: Surface water runoff estimates are debatable; see Hydrology report. Combination of check dams and 24 hour settling ponds will retain water and settle sediment adequately. No major springs (e.g. Spring Creek) will be affected by the pit.

26. d) Water Quality

Water quality data in the EIS are poor and not reflective of the nature of the onsite conditions. The submissions by Alumet will allow a greater understanding of the situation. Units should be checked for all tables and figures, and make certain that the units are given. Pages 1-127 through 1-157, and 4-17 through 4-19 should be reviewed.

Page 4-58: Para. 2, report on analytical data on water quality should defer to Hydrology & EIA Reports which are in the hands of the Task Force. Monthly samples were taken by Alumet and represent a clearer picture of the water in the area.

2. Judgements & Conclusions - Assessment of Impacts

27. In general, the evaluation of cause and effect in the EIS, based on a factual underpinning, has been poor. Numerous cases can be cited where the EIS states that an impact "will" occur, based on data regarding a condition that "might be present", or is "assumed to be present", or is "likely to conclude", or other non-factual, poorly substantiated situations. Certainly, it is impossible to categorically predict a change or impact without a factual baseline. Furthermore, it is clear that either the assumption was made that no environmental regulations exist

20. The units have been added to the table.

21. The units have been corrected.

22. These data were originally supplied to the Task Force by Alumet. They have been corrected in the FES.

23. The impacts have been reevaluated based upon the revised mining plan.

24. No mention of ground-water quality is made in this paragraph. Ground water problems, however, are mentioned. Such problems will exist.

25. "Shallow" as used here is a relative term and does not imply any particular depth. Resistivity surveys made by Greiner Environmental for Alumet indicate possible water table, which may be perched, at depths of 5 to 10 feet below land surface.

26. This is probably true. However, a spring shown on figure 1.0-2 of "Hydrology - Soda Springs Project" prepared for Alumet by Greiner Environmental, will be destroyed by the pit.

27. Modifications have been made in the text where appropriate. The text also has been amplified on the basis of information supplied by Alumet since the completion of the DES.

or that no regulations could be met and permits would be issued anyway. Neither could be further from the truth. In fact, no permits will be issued by Federal or State agencies until industry demonstrates a willingness and ability to meet existing standards. If the standards mean anything at all, degradation of the environment will be minimal.

The assumptions made and data utilized to render judgements regarding impacts in the EIS can lead the misinformed to consider the huge, negative impacts as certainties. But the EIS also
27 claims that no significant air or water quality impacts have been noted over the past few decades as a result of mining operations (Page 1-152). Only the chemical plants have caused pollution problems. Yet, no expansions are proposed for chemical plants, and the beneficiation plants produce no noxious pollutants. How is it possible to project massive disruptions under today's stringent environmental regulations when 30-40 years of mining without regulations have produced no serious problems?

The judgements on water quality, wildlife, antiquities, recreation, and socioeconomics are tremendously overstated. The following lists the major points on a page by page basis.

a) Air Quality

28 Page 1-170: Para. 1, source of fluoride emissions; the Simplot beneficiation plant is suggested as a possible source. Beneficiation is a washing and grinding circuit. It produces no fluorides. Simplot did not calcine at the time.

29 Page 1-171: Para. 1, fluoride emissions from the Georgetown Cyn plant - no data are presented. Is this a case of guess work by Idaho Health & Welfare, or a case of poorly stated data?

30 Page 1-172: Para. 3, despite all the data suggesting that radioactive emissions are well below recommended limits, the suggestion that more study be made leads the uninformed public to believe that a problem exists anyway. This is not apparent. Such statements are misleading.

31 Page 1-364ff: The air quality impacts of "new" plants is exaggerated. Only three new plants are proposed in two counties, not adjacent to one another.

The pollutant concentrations resulting from some plants, notably the Alumet plant, are below Class I standards; therefore, no significant degradation of air quality will occur.

28. The release of fluorides (gaseous and particulate) has been well documented by official correspondence to the IATF. In low temperature calcining (below 1600°F) no fluorine is evolved. However, when elemental phosphorus is produced, using high temperature calcining (about 2400°F), tetrafluoride and fluosilicic acids are produced.

Fluoride particulate emissions occur in the washing and drying process, and with both low and high temeprature calciners according to Charles E. Freshman, Idaho Department of Health and Welfare, Division of Environment.

Accordingly, since the Simplot ore beneficiation plant does emit fluoride particulate matter, the statement on page 1-170 of the DES is correct and should not be changed.

29. The text has been revised for clarity.

30. The Task Force is not suggesting that more studies be made; the text states categorically that further studies are necessary to determine what part of the existing radiologic levels are attributable to phosphate mining and processing. EPA considers all radioactive emissions a problem, regardless of levels.

31. As originally proposed, four new and one reactivated beneficiation plants were proposed. Although the beneficiation plants may operate within the laws and standards, the incremental contribution of each will contribute to lowering of air quality.

32 Page 4-28: Para. 5, calcining produces no fluorine emissions.

b) Water Quality

33 Page 1-111: Para. 3, "the Alumet project is likely to have significant groundwater problems." This statement is unsupported in fact, and does not reflect the proposed action and mitigation measures.

34 Page 1-342: and other places named later - predicted changes in steam characteristics and the attendant water quality problems all assume no standards will or can be met. The assumption is fallacious. The proposed Alumet action virtually prevents impacts.

35 Page 1-344: Para. 1, retention ponds "may be in some cases inadequate . . ." Where? Which ones? By how much? If one can determine the inadequacy of design, adequacy is easy to determine. "Possible underdesign" of French drains, etc., implies that "sufficient" design is known. Use this as a stipulation or condition of approval.

36 Page 1-345: Para. 2, all of the impacts under this paragraph assume underdesign of facilities. Proper design and enforcement of such will prevent water quality impacts.

32. There are two types of fluoride emissions which occur in the calcining process; gaseous and particulate. It is true that low-temperature calcining (below 1600°F) does not produce any gaseous fluoride emissions. However, at higher temperature calcining, or at about 2400°F, tetrafluoride and fluosilicic acid are produced.

Particulate emissions containing fluoride occur during both low and high temperature calcining, according to Charles E. Freshman, Idaho Department of Health and Welfare, Division of Environment.

33. Page 265 of "Environmental Impact Assessment, Proposed Phosphate Mining, Soda Springs, Idaho" prepared by VTN for Earth Sciences, Inc., states "The mining impacts on these ground flow regimes (Diamond Creek) will be local; however, the impacts will be severe." "The mining operations will not only affect the Webster Range recharge zone, but will also affect the regional ground water associated with the Diamond Creek flood plain". "The shallow water table ... will be intersected by the mining operation...which will inundate the mining panel". Page 106 and 107 of "Preliminary Environmental Impact Assessment, Bloomington Phosphate Project, Bloomington, Idaho, state: "Mine development and operation (at Paris-Bloomington) will intercept deep percolating water from the inconsolidated and consolidated overburden and divert water into the mining cavity." "This mine water could result in: A) Decreased structural integrity of overburden as a result of decreased resistance to hydrastatic pressures; B) Decreased traction on underground haul roads." "Ground water impacts due to mining could have the secondary effects of: A) Diverting surface water to ground water, thus impacting the quantity of water issuing from existing springs; B) Increasing surface and subsurface infiltration; C) Decreasing ground water availability for domestic and industrial uses adjacent to and including the mine operation." "Increased ground water infiltration, standing water, and ore oxidation could provide the opportunity for degradation of existing water".

34. VTN's "Environmental Impact Report on the Bloomington Project", page 108, states: "The construction of roads, buildings, etc. will remove vegetation, disturb existing soil conditions and alter existing runoff drainage patterns." "The greatest impacts from the mining operation will be increased erosion from disturbed areas and accidental oil and gas spillages from construction and mining equipment." "Water quality impacts may result from mine drainage and surface runoff".

35. This was written as a general, regional discourse. Specific sites are discussed in Parts 4-11. Also, runoff based on existing statistics, is sometimes exceeded. Two holding ponds have ruptured because of excessive runoff during the course of this study. The statements are made only to inform the public that even with what is believed to be adequate design, sometimes retention ponds or other structures do fail.

36. See response to above comment.

Page 1-346: Para. 1, "impacts from the transportation systems "appears both equivalent . . ." Where are the data? Localize the impacts so that they can be minimized or prevented.

37 How can it be decided that the projected water use will result in depletions. No evidence is presented. Water rights either exist or will be granted for operations with the implicit conclusion that no deleterious impacts on existing users will occur.

Where are the data demonstrating the need for new power plants as a result of phosphate development?

Page 1-349: Para. 2, "Improperly constructed . . . ponds are sources of contaminants". True, but this leaves the obvious conclusion that properly constructed ponds are not, and therefore, the impacts are insignificant.

38 Para. 3, assumes no enforcement of standards.

Para. 4, filling of settling ponds is easily remedied by dredging.

1

37. This is a qualitative statement, as indicated by the first word in the sentence. The statement is based on the fact that about the same extent of land areas will be disturbed by some transportation systems; cuts and fills for roads and railroads will have similar impacts as pits and waste dumps; roads and parking lots will reduce recharge, as will waste dumps; water-control structures will be required for both transportation systems and mines, etc.

"Depletion" does not necessarily mean "exhaustion" of the resource; the intended meaning here is "reduction".

38. See response to comment number 35.

39. Page 1-350: Para. 3, changes in slope stability should be localized, not discussed so that the inference is drawn that the problem is uniformly serious.

39. The text has been modified to reflect the local nature of impact.

40. Para. 4, spoil areas are sources of sediment, but only potential sources of water quality degradation. Proper construction of control devices can prevent degradation.

40. In general most dissolved metal concentrations will increase by insignificant amounts. The total amounts (dissolved plus particulate) will be related to the amount of suspended sediment derived from erosion of mine wastes.

41. Page 1-352: Para. 1, the statement concerning the effect of mitigation measures should be the core of the analyses, so that impacts reflect what cannot be mitigated.

41. This is the methodology followed by the Task Force. Impacts were delineated, mitigating measures were considered, and unavoidable impacts determined.

42. Page 1-353: Para. 4ff, sediment increases in Diamond Creek resulting from the Alumet project are estimated to be high. Alumet estimates improvements by controlling grazing and rehabilitating Diamond Creek.

42. Impacts from mining and processing nevertheless will occur.

43. Page 1-357: Para. 1, breaching of sediment ponds can-not occur with proper design and maintenance.

43. Experience in the Idaho phosphate mining area, and elsewhere, shows that breaching of ponds has occurred despite best efforts to design and maintain them.

44. Paras. 2 and 3, toxic elements will not go into solution as a result of leaching (see Alumet EIA). Settling of 99%+ of sediment can occur within 24 hours. Therefore, no problem will occur.

44. Leaching is not discussed in these paragraphs. Under some conditions, biota can ingest sediment and cause release of toxic forms of metallic compounds. There is no evidence of such an occurrence at present; however, the possibility exists. Further data on leaching have been added to the FES.

45. Para. 5, page 1-358, all; the pH levels in Diamond Creek and other waters ranges from 7.9-8.4. This minimizes the solution of toxic materials.

45. This is so stated in the DES.

46. Page 1-359: Para. 1, stating that "mining will result in slight increases in metal concentrations is misleading. The increases, even with discharges, are only by a magnitude of 1 to 2 ppb (µg/l).

46. In general, most dissolved metal concentrations will increase by insignificant amounts. The total amounts (dissolved plus particulate) will be related to the amount of suspended sediment derived from erosion of mine wastes.

47. Para. 2, the statement which suggests that toxic constituent concentrations will rise to undesirable levels is not substantiated. "May" is a better word, although the likelihood is low under proper enforcement of State and Federal regulations.

47. The text has been revised to better reflect the low probability.

48. Page 1-361: Para. 4, "improper handling of waste oil . . ." Design proper measures and enforce them.

48. Designing and enforcing proper measures for handling of waste oils and fuels does not prevent accidental spills, no matter how much precaution is taken.

49. Page 1-362: Para. 2, a basic contradiction exists in the slurry transport system statement. Demand for water cannot increase significantly if water is recycled.

49. Paragraph modified to eliminate contradiction.

50 Para. 3, the water use projections of 600 gpd per capita is excessive, even by arid Southern California or Arizona standards. The actual municipal use, industry aside, shouldn't exceed 250 gpd per capita.

51 Page 1-363: Para. 1, water use for beneficiation and chemical plants are not equivalent. Do not take short cuts in this analysis; calculate actual water uses by each process and plant. Plant design will have a significant impact on water use.

52 Page 4-26ff: Because Alumet proposes and has designed a zero-discharge system, no impacts on water quality will occur, consistent with Federal and State regulations (see submissions). All of the impacts listed in this section are overstated.

53 Page 4-39: Para. 4, No vegetation will be removed along Diamond Creek or Kendall Creek. Therefore, no water quality degradation can occur. Alumet proposes to rehabilitate Diamond Creek so that the fisheries can be improved.

54 Page 4-41: Para. 2, Seepage from the tailings pond will not exceed 2.5×10^{-9} cm/hr, and should be less than this on the average. The silmes have a permeability rate of 0.01 in. per day. Therefore, no reduction in water quality is expected.

55 Page 4-64: Expected increases in sediment loads are exaggerated. A complete retention facility is proposed at Swan Lake Gulch.

c) Wildlife and Vegetation

The entire analysis of vegetation and wildlife is slanted against any human activity in the area, and clearly does not reflect the true picture in the area. The numerical data, particularly big game counts, reflect censuses conducted in the mid-1960's or early 1970's, when game populations were at their highest levels, and prior to the Department of Fish & Game's two-deer seasons. The numbering of other faunal species also left a good deal to be desired. Where no data were available, such statements as: "may use" are liberally sprinkled throughout the document.

56

Another disturbing tendency is reflected by a common usage of "in the area". Where specific numbers were not available, lists of animals were portrayed as residing, inhabiting, using, frequenting, or passing through "the area". No effort was made to associate mapped vegetation, land use, and habitat preferences, and describe the specific nature of wildlife usage.

50. Figures are changed. Data used in DES were for peak demand; figures for average use are substituted.

51. No short cuts were taken; no assumption was made that water use for beneficiation and chemical plants is equivalent. Figures are based on present use by beneficiating plants added to that used by chemical and other plants. It is true more efficient use of water may be possible, but we have no way of predicting how much water might be thus saved in future operations.

52. The impacts as stated in the DES were based upon mining plans as originally submitted; impacts have been modified to reflect the revisions in the mining plans.

53. Page 268 of "Environmental Impact Assessment Proposed Phosphate Mining, Soda Springs, Idaho" prepared by VTN for Earth Sciences, Inc. and others, states, "The 900 acres of land which will be mined or otherwise disturbed will affect approximately 1,400 acre feet per year of potential recharge to Diamond Creek". Disturbance of this area implies removal of vegetation. The Environmental Impact Assessment further states on page 268, "As a result of topographic alteration, this water, through natural channelization, could produce surges of floodwater entering the mining area. These surges may produce flooding, increased erosion, increased sedimentation, and could possibly hamper mining operations."

54. The statement in the text has been modified.

55. No retention structure is absolutely certain. Inasmuch as they are designed on a recurrence probability, there is always the possibility of exceeding the design capacity and possibility of failure.

56. Studies have been undertaken to relate vegetative types to species use. Such information will be available at the completion of the studies.

Critical areas are defined as areas upon which a species is totally dependent for survival or reproduction at various times of the year. The population levels of the various species using different sites vary and can range from few to several hundred.

The Department of Fish and Game 1976 winter census revealed considerably fewer animals in the area than the earlier censuses. If the levels of habitation in the mid-1960's reflects the carrying capacity of the system, then the present population would seem to have a valuable opportunity to expand. The criticalness of the "critical" habital, which seemed to be every acre in a 2000 square mile study area, needs to be evaluated in these terms. 56

Even if Maps 8 and 9 of the EIS are to be considered accurate, and there is some doubt as to the extent of critical habitat portrayed in the maps, the losses predicted in the EIS are exaggerated considerably.

Some specific examples are provided below:

Page 1-191: Para 3, While the EIS states that an ecosystem analysis has not been made, it later calculates the precise number of animals which will be lost to expanded mining. No meaningful calculations can readily be made without a semblance of ecosystem analysis. 57

Page 1-197: Paras. 1 & 2, It is suggested that 2500 elk are presently in the area; that the populations during depradation period of the early 70's "probably exceeded 2500" (same as above); and, that the range can accommodate only 2000. Do we have an overpopulation of elk? The next sentence relates the possibility of acquiring more critical winter range. How? Where? How critical is the present range? 58

Page 1-201, Table 1-20: Under Unit 76, 2500 deer are shown for 1974. The 1976 census shows 1885, a loss of 600 in two years, without an increase in mining. Could there be some other cause for this? The elk count in 1976 was 307, not 2500. Only 39 moose were noted, as well as a mere 24 sage grouse. 59

Page 1-204: Para. 3, The suggestion is made that the area of the Diamond Creek mine will seriously affect moose; yet along the reach of Diamond Creek adjacent to the mine, all the willows and other reparian vegetation have been destroyed for grazing land improvements. The major moose habitat is the four to six miles south of the property. 60

Page 1-213 (1-214) Table: The indicated pairs of geese in Diamond Creek are 6, which is less than 0.6% of the total; yet this was stated as a significant and critical goose habitat. 61

57. Numbers are based on projected estimates.

58. Additional elk winter ranges have recently been acquired from private landowners in the north end of the study area. These lands were once wintering areas but were converted to dry farms. Habitat improvements on these lands will increase the carrying capacity on this winter range. Other private lands adjoining wintering areas have a potential for purchase.

59. Game counts are not total census but trend counts taken in designated areas. They serve as long-term trends and do not necessarily reflect annual changes.

60. We agree that riparian vegetation along Diamond Creek near the minesite is noticeably absent. However, moose do utilize areas closer than 5 to 6 miles south of the property including side hill aspen patches and the valley floor.

61. Despite the low numbers, the area is considered a significant nesting area in the upper Blackfoot River for Canada geese.

62 Page 1-224: Para. 2, The habitat at Diamond Creek is seen as "suitable" for whooping cranes because sandhill cranes have been observed. Portions of the valley may be suitable, but not within at least one mile of the operation.

63 Page 1-227: Para. 2, Spring Creek is not adjacent to a proposed mine; it is two miles away. Alumet studies have shown that the mine will not impact Spring Creek.

64 Page 1-374: Para. 2, The elk wish to remain >1/2 mile from human activities; this is not always noted in the area, but even if true, the identified (Map 8) elk wintering areas is over one mile from the nearest possible human activity at Diamond Creek.

65 Page 1-374: Para. 4, ff(375), The estimates of losses of elk are overestimated; since the range in Unit 76 can contain 2000 elk, and only 307 are present, how can the minor acreage disruptions kill 375 elk, or even 50% of the 307?

66 Page 1-375: Para. 3, Estimates of deer losses - range at or near carrying capacity? The evidence of populations from 1976 census do not reflect this statement. Only 1900 deer are in Unit 76; how can we lose 3000?

67 Page 1-376: Para. 1, Where are the 7 known critical winter ranges for sage grouse? The 1976 census shows only two areas of any concentration: Little Valley and Bloomington Dry Canyon, both in Unit 78. Only 24 grouse were seen in Unit 76 (6%). Only 421 grouse were observed in the region. Clearly there must be more, but the vast estimates of losses are not reflected in the data presented.

68 Para. 3, Columbian Sharptailed Grouse are a species whose status is "undetermined". Yet, we could render the population "endangered" by reducing their habitat. Where is the habitat? Delineate it on a a map. Show the data in the EIS.

69 Page 1-378: Para. 2, Projections of "significant" water fowl areas. Where are the data to show Diamond Creek as significant? Which portion of Diamond Creek? It is surely not a significant goose area (p. 1-213).

70 Para. 4, The reestablishment of the Trumpeter Swan will be precluded? How? Will Diamond Creek-the stream and wetland areas- be altered? Not according to Alumet plans.

71 Page 1-379: Para. 1, Losses of beaver. Alumet has proposed to relocate all beaver possible. Only 1 stream (Cabin Creek) will be altered substantially, and Cabin Creek

62. We do not agree. Use areas will vary with location and disturbance factors. Sandhills have been seen near the proposed Diamond Creek minesite.

63. Based upon available data, we believe there is a potential for loss of ground water that feeds the springs in the upper portion of the creek.

64. The figure of one-half mile is a general figure. The effect of disturbance on elk differs with terrain, cover, season, and types of disturbance.

65. Animal losses or reductions in numbers are a result of lowered production, and exceeding carrying capacity of adjoining ranges. Acreage disruptions are only one factor affecting the animals.

66. Losses are based on carrying capacity projections and ability to reach these levels with expanded mining operations.

67. The seven areas are Schmid Ridge, Henry Mine, Caldwell Canyon, Paris-Bloomington, Dry Valley, Little Valley and Trail Canyon. In referring to only 24 grouse observed on a winter aerial survey in Unit 76, it should be emphasized that sightings such as this are incidental to big game observations. The important factor is in identifing sagegrouse winter habitat that are known to be vital to the life cycle of this species. In evaluating losses of habitat, the number of birds initially lost is not of prime importance, but rather the supporting habitat is lost.

68. The sharptail range was not depicted on the map.

69. Aerial surveys and observations of goose broods on lower Diamond Creek indicate that geese occupy the area. An aerial survey in 1974 showed 6 breeding pair for a minimum potential of 36 goslings.

70. Large-scale increased human disturbance will preclude re-establishment in former habitat.

71. Destruction of beaver habitat will render a stream or stream section unproductive forever. All other beaver habitat is presently filled to capacity so any relocation will mean corresponding reduction in resident species.

71 is not a significant beaver area. Fewer than six have been observed; 1500 beaver were legally harvested in the region.

72 Para. 3, Losses of habitat and nesting sites for golden eagle are not specific to location. Electrocutions are possible if structures are not properly designed. Provide conditions to prevent such improper design.

73 Page 1-381 and 1-382: Whooping crane habitat in Diamond Creek. Even if the entire area from Yellowjacket Creek to Timothy Creek were destroyed, less than 0.1% of "potential" habitat would be affected. In actuality, this area will not be directly affected at all. No significant disruption of whooper establishment will occur.

74 Page 1-383: Para. 2, The trout populations in Georgetown Canyon have become reestablished in less than 10 years, despite a dirty operation, no reclamation, "emissions of fluoride" still allegdely occurring, and no effort to minimize the original impacts. Just think what might happen if none of these conditions were in evidence. Fish populations could be maintained at their original level with some planning, as Alumet has proposed.

75 Page 1-384: Para. 2, The Alumet Diamond Creek plans call for a total containment of wastewater. Any water discharged to creeks artificially will be natural runoff containing no more sediment than under present conditions. The calcining plant cannot possibly affect fisheries.

76 Page 3-15: Para. 3, According to the 1976 game census, Diamond Creek is not an area of major concentration of any avian species.

77 Page 3-40: Para. 5, The habitat losses are not in relationship to the recent facts about the area.

78 Page 4-20: Para. 5, Where were the 50 elk that may use the area during 1976? What is the "area" under question? The identified winter range is north of Timothy Creek, 2 miles north of any area affected by Alumet plans. Cattle compete effectively with the elk for grazing space in the valley floor for 3 to 4 months during the spring, summer, and fall.

79 Para. 6, No deer were spotted during 1976.

80 Para. 7, Eight moose were seen wintering in an area extending from Timber Creek to Timothy Creek in 1976.

72. General areas of known eagle nesting have been identified as well as some specific sites. The design of utility lines over private lands to prevent electrocution is a responsibility of other than the USGS and land managing agencies. Utility companies, however, are aware of such design.

73. There is potential for loss of the possible habitat as stated in the EIS, as whooping cranes can and do occupy sandhill crane habitat.

74. The trout populations in Georgetown Canyon have not reestablished near its past levels. In the unaltered stream sections, the trout populations are probably close to their original numbers. In the stream sections altered by the mining activity, trout populations are at a very reduced level and will continue to be so until the stream regains its original habitat which may take up to 100 years.

75. If water entering Diamond Creek after completion of the mine complex is as good both from the standpoint of quality and quantity as before then, it will not affect fish populations.

76. Avian species are noted on game trend counts as incidental observations and do not constitute population levels or trends.

77. The habitat losses cited are based upon data available to the Task Force.

78. Elk use in wintering areas vary according to snow depth and temperatures; use areas therefore may shift from year to year. We agree there is competition between elk and cattle, for space during parts of the year and for forage the entire year.

79. The reliability of whether or not deer occupied the area, as determined from sightings, would depend upon the frequency and duration of the observation. The statement, as made, cannot be adequately evaluated.

80. Actual observation and population levels vary due to difficulty in observing animals in heavy cover types. Other indicators of population levels and distribution such as tracks and droppings must also be used.

81. Page 4-21: Where are the black bear? Beaver are not abundant, or are there data to show this? What "area" is occupied by water fowl during spring, summer, and fall? "Marshy areas in the Diamond Creek drainage . . ." This covers a stream 15 miles long. No significant marshy areas will be disturbed by Alumet. Sandhill Cranes have been observed 1-2 miles north of the nearest proposed Alumet disturbance.

82. Para. 5: How can a rare or endangered species, the golden eagle, be "common"?

83. Page 4-22: Para. 3, The fisheries have been seriously degraded in Diamond and Kendall Creeks, although substantial populations still exist. The statement concerning the ability of the fish populations to "rebound" depends upon one factor, the elimination of the cause of degradation: the destruction of vegetation, shade, and streambanks, and siltation of streambottom by overgrazing. Alumet proposes to remedy the situation and rehabilitate Diamond Creek as a part of its operation. If no mining occurred, degradation would continue.

84. Page 4-71: The deer losses attributed to the Swan Lake Gulch mining are overstated considerably. There are not 400-500 deer in the area at present.

190

d) Antiquities

85. Page 1-235: Para. 1, The "potential for discovery of antiquities" is a point which needs considerable qualification before its true legitimacy is achieved. The potential for discovery varies among different locations in the region. Some areas - ridge tops, steep canyon sides, etc. - can be ruled out easily. Water sources and game migration routes are among the areas to be reviewed carefully. All regulations on mining require that a detailed archaeological investigation be conducted prior to disturbance. This will prevent the wholesale loss of information and artifacts.

e) Recreation

86. Page 1-330: Paras. 3 and 4, Diamond Creek Valley (Upper Valley) are not areas of heavy use. The area is not accessible during 6-7 months of the year. Most of the land is private, and little traffic or camping use have been observed. The recreation potential of the area is greater than its use, especially if access is improved.

81. Black bear are distributed throughout the study area. Beaver occur on almost every water course where food is currently available. Caribou and Bear Lake counties rank highest in the state for the number of beaver harvested by trappers. Waterfowl breed throughout stream drainages located with the phosphate mining impact area. Beaver ponds produce a large number of local ducks. Geese utilize the Blackfoot River and lower Diamond Creek for both breeding and resting areas. Sandhill cranes occur regularly on the site proposed for the Alumet development.

82. A rare or endangered species can have common occurrence in a remnant of the last existing habitat and yet be almost extinct over much of its former range. The golden eagle is not listed as either rare or endangered.

83. Alumet proposes to rehabilitate Diamond Creek and also channel most of Kendall Creek below the road. The new channel of Kendall Creek will go around the proposed location of their tailings pond. This total alteration of Kendall Creek will virtually destroy this stream.

84. Aerial counts up to 1969 indicated a wintering population estimated conservatively at 400 to 500 deer. Severe winter losses during the winters of 1970 and 1971 drastically reduced these populations. However, the potential exists to restore these herds to their former population levels.

85. This is so stated in the manuscript.

86. We do not agree. The statement is correct as it stands.

Page 4-23: Paras. 2 and 3, The level of use implied for Upper Valley is substantially overstated. Fishermen and hunters, while frequently observed around the Blackfoot Narrows, rarely go as far as Diamond Creek. Importantly, 87 through, the immediate Upper Valley area is bypassed and most hunters and fishermen travel upstream to Upper Diamond Creek. The portion of the creek in Upper Valley is not accessible due to fencing of private land for grazing purposes.

87. The statement as modified is correct.

Page 4-24: Para. 2, A "natural immodified landscape" does not exist in Upper Valley. Considerable diversion of Kendall and Diamond Creeks have reduced flows, silted the stream bottom; spraying of willows has eliminated shade vegetation and allow cattle direct access to the streams, resulting in 88 broken down banks. Sagebrush has been sprayed to encourage grass productiion. A borrow pit for road base material is operating on the leasehold (not by Alumet); clear cutting of many acres of beetle killed timber is visible for 4-5 miles south of the property. Only an untrained observer would conclude that the area is unmodified.

88. The statement has been modified to more nearly reflect this observation.

f) Socio-economics

The entire section on socio-economic impacts is a 89 product of a misunderstanding of the social and economic system in the area. Most of the comments herein relate to the Soda Springs vicinity, but are applicable to the region as a whole.

89. The Task Force rejects the argument that the section on impacts is a product of a misunderstanding of the system. The socioeconomic part of the EIS was prepared by the Southeast Idaho Council of Governments. If anyone understands the social and economic system of the area, it is SICOG.

The subject of population increases as a result of industrial growth is a difficult matter to project on a uniform basis. Clearly, the same factors are at work throughout the region, yet they operate to different degrees locally.

For example, the population of Caribou County has increased between 1950 and 1970 from 5600 to 6500, a growth 90 of 900 people (1% per annum). The growth in the last four or five years was between 2% and 2.5% per year. Virtually 100% of the growth in the area can be attributed directly to the growth in the phosphate industry. Essentially no other reason for growth exists. The growth in the phosphate industry has added nearly 500 employees during the same period.

90. The more sophisticated analyses used in the FES do not rely upon rigid multipliers. These analyses were prepared by SICOG for the FES.

The EIS makes the following assumptions about industrial 91 growth:

91. See response to comment number 90.

1. Each "new" direct job represents a new household.

2. Each "new" direct job creates 1.8 new indirect jobs.

3. Each new indirect job represents a new, and different household from the direct job.

In Caribou County, however, there are at least 1.2 jobs per household, as nearly 40% of the population is employed. This cuts a minimum of 20% off the 1.8 employment multiplier (1.4).

A second serious problem with the population growth analysis is that the assumption was made that all of the growth projected by the various companies would occur in addition to the current growth rate. But, because the current growth rate reflects expansion in the industry, this assumption isn't correct. Virtually all of the growth projected by existing, operating companies is represented by a 2-2.5% annual growth rate. Only the Alumet and IMC proposals are exceptions. Alumet and IMC propose a total of 420 employees over essentially a 4 to 5 year period (if IMC does begin operations). A multiplier of 1.4 in Soda Springs seems high. All of the services and support facilities are present already. Even counting new teachers, government officials, and other service personnel, a multiplier of no more than 1.0 appears possible. With this condition, a maximum of 850 new jobs could result. Many of these, at least 35% could come locally, resulting in a maximum of 550 new jobs. This is a far cry from the 6500 new jobs projected.

If only Alumet begins work (as appears likely), only a maximum of 200 new jobs may be created. These new families spread over a two year period represent a 3.5-4.0% growth rate increase for two years, before restabilizing at present levels. Certainly, this is not a difficult growth to which to adapt. At this highly liberal growth rate, Caribou County population would increase to about 11,500 over thirty years. The information available suggests a lower growth rate, still.

The impacts in the section from 1-391 through 1-419 are based almost exclusively on the projections of 6500 jobs. Because of the lack of realism of such projections, the entire impact analysis for the socio-economic and recreation areas is invalid. The level of impacts on services and government will be nearly 5% of that stated, as jobs created will approximate only a maximum of 5% of the 6500. This essentially prevents a boom-bust growth cycle from occurring.

92. The revised population estimates used in the FES agree very closely with those cited here.

The third major deficiency in the socio-economic section was that of the cost:revenue analysis. Although the Task Force did not have data on the tax base increases by plant and mine development, it stated the conclusion that a net revenue deficit would occur. The significance of this is tremendous. If a given mine and plant costs $75 million, the tax returns to the county could approach $1.5 million annually. This volume of money rapidly closes the gap between costs and revenues.

93. Depending upon specific locations of the mines and plants, some counties will benefit from the increased tax revenues. Other locatities, however, can be substantially impacted without benefit of such revenues.

Transportation was viewed as a serious problem in the area. Because SICOG proposes a regional transportation system, and Alumet has indicated its willingness to participate, and because Alumet is the only new operation scheduled within the next five years, the transportation situation will be maintained at least at its present condition, and perhaps improved.

94. The comment is noted.

No ore trucks will travel existing roadways, due to the location of the plant adjacent to the mine. Any haul roads developed will judiciously avoid existing public roads.

95. The comment is noted.

Page 4-30: Para. 4, This paragraph is exceedingly important, for it reveals the true socio-economic impact of the proposed phosphate development. The impacts of the Diamond Creek proposal are not seen as significant. Because it is the only mine and plant actually scheduled for development in the near future, and all other developments are seen as sequential, the social and economic impacts of the phosphate development actions will be insignificant.

96. While the immediate socioeconomic impact of the Alumet operation is not in itself highly significant, the overall impact of the projected growth, which includes Alumet, is significant.

Page 4-31: Para. 5, The suggestion that air quality degradation will degrade aesthetics is not valid; the analyses on Page 1-365 shows the Alumet plant within Class I standards for the Prevention of Significant Deterioration, which is defined by saying that this is a class in which any degradation beyond the standard (5 $\mu g/m^3$) is significant. Alumet's operation will produce only 20% of this extremely strict standard.

97. Although air quality is maintained within Class I standards, there will still be some particulate matter, steam, and odor associated with the operation.

5. Mitigation Measures and Unavoidable Impacts

The sections on mitigation measures, unavoidable adverse impacts, short term use vs long term productivity, and irreversible commitment of resources substantially overestimate the predicted problems, both in type and degree.

Much of what is said is based upon three factors which either are inadequately developed or have changed: 1) Project description; 2) baseline environmental data; and 3) Mitigation measures. The baseline environmental data were inadequate to

begin with, but have been improved by the development by Alumet of its Hydrology, Air Quality and Meteorological Impact Assessment, and Environmental Impact Assessment documents. As related above, all are in the hands of the Task Force. Further comments and information, not available in these documents, was provided herein.

Alumet conducted these studies to help optimize environmental protection and mining/processing efficiency. By so doing, some substantial changes have been made from the original plans:

1. The mine will be developed in a single pass, instead of two, reducing the total disturbed area at any one time to approximately 300 acres.

2. The waste dump will be consolidated at the north end of the mine to avoid live streams and facilitate backfilling and regrading.

3. Alumet will contain all wastewater runoff and use it in mine and plant operation. No discharge of wastewater will occur in the area.

4. Alumet will rehabilitate Diamond Creek as a part of its operation.

5. The pit will be completely backfilled, except for a 70 acre lake at the southern end.

6. Alumet will continue its existing hydrology, water quality, meteorology, air quality, and wildlife monitoring program to obtain data to further refine and define mitigation and operational activities as the project develops.

7. Alumet has prepared a modified and advanced reclamation/revegetation research program, which has been submitted to the Task Force.

As a result of these and other actions, Alumet can report the following comments on Chapters V, VI, and VII of Section 4 of the Draft EIS.

Page 4-37: Para. 1, Tailings pond is 650 acres. All soils will be stockpiled for revegetation. No significant net disturbance is anticipated.

Para. 2, Streamflows above the pit will be diverted around the pit and allowed to enter Diamond Creek under near-natural conditions. Less than 20% of the projected dewatering will actually occur (1000 gpm per 3000' panel). All can be used in plant process, if necessary, or discharged as appropriate. No increase in Diamond Creek flows beyond natural conditions is expected.

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98. The comments have been included in the revised description of the mining plan.

99. The text has been changed accordingly.

100. The project dewatering rate of 1670 gpm per 1000-foot panel was obtained from data furnished the Task Force by Alumet. The statement has been deleted, based upon revised data.

Page 58, "Hydrology Soda Springs Phosphate Project" prepared by Greiner Environmental for Alumet in March 1976, states that Diamond Creek loses water in this area to the ground-water system. Also, the water table, based on a resistivity survey, is shown in Figure 42.1-4 of the same report as being 5 to 10 feet below the land surface in the area just west of Diamond Creek. The water in Diamond Creek in this reach is probably hydraulically connected to the shallow ground water, which may be perched, and not to the deeper water table. If the pit intercepts this shallow ground water, the losses from Diamond Creek could increase. Cross section A7-A7' of the Diamond Creek project mine plan indicates that the pit will intercept 125 feet of alluvium near Diamond Creek. The shallow, and deeper, ground water probably will be intercepted along this cross section.

The design criteria presented in the Environmental Assessment, Volume 2, shows that the controls will handle a 10-year event but the life of the project will be 27 years. On this basis one could expect capacities to be exceeded perhaps two or more times during the operation of the project.

Para. 3, Preliminary studies by Idaho Bureau of Mines and Geology suggest that at least a portion of Diamond Creek adjacent to the mine is "perched", well above water table. Alumet drill logs around the plant site show water table at >30' below surface (sent to Task Force).

Because of the total containment system, no increases in stream sediment loads will occur. Underdesign can easily be checked; our design engineering is in the hands of the Task Force.

101 Page 4-39: Para. 1, Air emissions from the plant will be so low as to be nearly undetectable; the 1 $\mu g/m^3$ increase in particulates is from an average base of 51 $\mu g/m^3$, or a 2% increase in average dust loading at the worst location. The overall impact will not be detectable.

102 Para. 3, The losses of elk, moose, and deer are not only speculative, they are not supported by data. Sufficient range is available for "displaced" animals. Moreover, Map 8 suggests that the "critical" winter ranges for deer and elk will not be affected by the Alumet operation. Beaver will be translocated in cooperation with Fish & Game. No waterfowl use areas will be directly impacted; the areas suitable for such use is north of the nearest disturbance by 1-2 miles. Fisheries will be improved by the proper implementation of Alumet's mitigation measures.

103 Para. 4, Except for Cabin Creek, which does not flow into Diamond Creek, no vegetation will be removed from streambanks; rather, it will be restored along Diamond Creek, to its benefit.

104 Paras. 5 and 4-40: Forage for cattle will be removed, but this will eliminate the source of existing degradation in the area-overgrazing. This is seen as a net benefit.

105 Page 4-40: Para. 4, The area is not natural; it is strongly man-modified. The mine and plant will be more visible, but the ecology of the area can be maintained despite their existence.

Chapter VI is essentially repetitions of the invalid or overestimated impacts reported in Chapter V. The above comments apply herein.

Chapter VII greatly overestimates power consumption. See above.

101. The computed maximum annual and 24-hour ground-level concentrations for particulates for Alumet - Diamond Creek, as shown on pages 1-365 and 1-368 of the DES, are 1 μgm^{-3} and 8 μgm^{-3} respectively. These values are below the most stringent (Class I) incremental increases allowable under Significant Deterioration regulations of EPA. The source of the "base of 51 μgm^{-3}"is unknown, but if this represents annual particulate values existing in the area, it is still below the National Secondary Air Quality Standard annual geometric mean of 60 μgm^{-3}.

102. Since specific research has not been made relative to losses attributed to present mine operations, it was necessary to arrive at the best estimates possible, based on available data. Map 8 is intended to provide general, overall patterns; specific, detailed delineations of smaller areas cannot be adequately shown at the scale of the map.

103. Based upon the revised mining plan, there should be no increase in water temperature from removal of vegetation. The statement has been deleted.

104. The overall loss of forage is an impact. We fail to see how loss of this forage is tied to elimination of overgrazing which is then considered a benefit. The logic assumes overgrazing as a standard practice.

105. The area is man-modified inasmuch as it consists of farms and ranches. The mine and plant will alter this pastoral setting. The text has been modified.

Chapter VIII, Alternatives

106 Page 4-45: The lake has been reduced to its minimum size of 70 acres. The dump has been relocated to prevent the discussed environmental problems. Deep well reinjection of water is an alternative only if it appears feasible on the basis of continuing hydrologic work.

106. The comments are so noted. Deep well reinjection would be subject to both Federal and State laws.

WRITTEN COMMENTS ON THE

DRAFT ENVIRONMENTAL IMPACT STATEMENT

DEVELOPMENT OF PHOSPHATE RESOURCES IN SOUTHEASTERN IDAHO

SUBMITTED TO

INTERAGENCY TASK FORCE

197

PREPARED FOR ALUMET
Soda Springs, Idaho

By

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Mr. Leslie M. Walker, P.E.

Mr. Kenneth Wood

PREFACE

Written comments relative to the Draft Environmental Impact Statement Development of Phosphate Resources in Southeastern Idaho, No. DES 76-15, and concerning the electrical load growth expected as a result of the phosphate industry development.

The following comments concerning the electrical energy impacts associated with the development of phosphate resources in Southeastern Idaho, have been prepared by Walker Engineering Company, an independent consulting firm with offices located in Pocatello, Idaho. Walker Engineering has been retained by Alumet to provide preliminary project planning, determination of electrical power requirements, and to assist in obtaining an electrical power supply for their proposed plant. In addition to these services, Alumet requested that we extend our studies to incorporate an independent analysis of electrical load growth in the Southeastern Idaho phosphate industry and to relate our findings to the figures presented in the Draft Environmental Impact Statement. The comments presented herein are, therefore, intended to supplement, update, and clarify the information presented in the Draft Environmental Impact Statement to more accurately reflect the actual situation as it will develop during the progress of implementation of the proposed plans. The information presented is based upon detailed studies of the assumptions and conclusions outlined in the Draft Environmental Impact Statement, discussions with decision making personnel employed by the firms whose proposed plans are reflected in the Draft Environmental Impact Statement, our knowledge of the area demographic features, and electrical studies derived through twelve years of directly related work in Southeastern Idaho.

As stated above, we have involved ourselves in a detailed study of the Draft Environmental Impact Statement and while we find it to be a comprehensive and generally accurate report, we feel there are significant

1. The detailed analysis of electrical energy requirements discussed in this comment have been considered in the preparation of the FES. The Task Force found these comments very useful.

inaccuracies which are deserving of correction, particularly as related to the projected electrical loads and impact on the area. These bear on three main factors:

1. The electrical growth ffgures are not stated in terms that are utilized by the electrical industry in forecasting future loads. To be properly quantified, these loads should be presented by quantity and the time that the power must be made available.
2. Expansion of the phosphate industry will be contingent upon growth in demand for phosphate products. Growth figures presented in the Draft Environmental Impact Statement appear to be substantially in excess of generally accepted market growth projections.
3. Significant changes in Southeastern Idaho phosphate industry expansion plans have taken place since publication of the Draft Environmental Impact Statement. The most significant of these changes has been Monsanto's cancellation of a planned 230 megawatt expansion to their Soda Springs elemental phosphorus plant and mine.

The result of these factors is that the actual projected load growth is 22.94 megawatts, in lieu of the 270 megawatts stated in the Draft Environmental Impact Statement. In addition, 41 percent of this 22.94 megawatt requirement (the portion required for Alumet operations) is available and committed from existing sources leaving only 13.41 megawatts of load to be acquired over the next 12 years. The following information has been prepared to substantiate the conclusions outlined above.

For the purposes of predicting future electrical needs represented by these mining plans, we have separated the electrical loads into two categories; industrial loads, and residential loads. The industrial loads represent the power required by each individual company to meet the needs of their particular process(es), and the residential loads represent the electrical energy required by the new residences created by employment generated by new jobs in these industries.

Industrial electrical energy loads have been obtained by reviewing each companies growth plans and by verifying these growth values with company representatives. Residential loads have been computed utilizing factors and assumptions discussed later in this report. The electrical energy values derived are loads assignable to the mining effort or, in other terms, the additional electrical load required by the proposed mining efforts including plants and personnel.

The electrical load growth figure given by the Draft Environmental Impact Statement, page 1-412, is 270 megawatts. This load growth figure is not presented in terms of expected electrical energy usage by each company or the year that the expected growth would occur. Further, there was no indication given as to how much of the 270 megawatt growth was attributed to the elemental phosphorus industry which currently represents 86 percent of the phosphate industry electrical consumption. To clarify this point we contacted the appropriate impact statement task force members and were advised that they had assigned a 230 megawatt growth to the Monsanto elemental phosphorus plant, a 7 megawatt growth to the FMC elemental phosphorus plant, with the remaining 33 megawatts allocated to growth of the balance of the phosphate industry.

Our initial calculations were based on industrial and residential loads exclusive of the actual growth allocated to elemental phosphorus plants and the results are presented in Table 1.

It will be noted that our calculations indicate a 32.62 megawatt growth due to phosphate industry and related residential growth exclusive of actual elemental phosphorus plant growth. Our figure correlates very closely with the 33 megawatt value given us by the task force members.

All of the figures, computations and results presented to this point have been predicated on the values presented in the Draft Environmental Impact Statement. They are all optimum values in that they present the highest possible growth potential for the industry. Current events have modified these conditions and we can now present a more probable electrical energy demand pattern for the final draft of the impact statement.

(a) Monsanto will not expand their elemental phosphorus plant or mining efforts as previously inferred. This will eliminate 230 megawatts of growth previously reported.

(b) FMC has no current plans to expand their elemental phosphorus plant, and will not develop their mining properties before 1985.

(c) International Minerals and Chemicals has delayed indefinitely their plans for mining in this area.

(d) Earth Sciences Inc. has indicated to us that their maximum electrical impact will not occur before 1980.

The results of these current decisions is the cancellation of 237 megawatts growth attributable to the elemental phosphorus plants, and the delay or cancellation of other phosphate industry electrical loads.

INITIAL CALCULATIONS OF
INDUSTRIAL AND RESIDENTIAL ENERGY INCREASES
FROM DRAFT E.I.S. DATA

YEAR	COMPANY	INDUSTRIAL LOAD MEGAWATTS	RESIDENTIAL LOAD MEGAWATTS
1976	J. R. Simplot	1.000	No Increase
1977	Alumet	8.000	0.937
1977	Earth Sciences	5.000	0.404
1978	Int. Min. Chem.	9.000	1.405
1980	J. R. Simplot	None	0.300
1981	FMC	2.000	0.444
1982	Alumet	2.000	No Increase
1984	Monsanto	1.500	0.327
		28.800	3.817

TOTAL: 32.62 MEGAWATTS

Table 1. Initial Calculations of Industrial and Residential Energy Increases from Draft E.I.S. Data

In reviewing the current and updated status of the phosphate mining plans and resulting electrical load growth, we have determined that the actual electrical energy increases will be as shown in Table 2.

The electrical loads that we forecast are based on industrial information obtained from the companies involved, and represent our estimate of the earliest possible date that plant expansions will occur. Once we established these expansion dates and the number of new employees required, we projected the number of new housing units required to serve the area. Our projections of additional plant expansions and of subsequent housing growth will be found to be different in both timing and number from figures presented in the Draft Environmental Impact Statement, but again, we emphasize that our figures are valid expressions of current expansion plans expected within the phosphate industry.

In determining the number of housing units required to serve the additional people migrating to this area, we have established the following criteria:

(a) Number of basic jobs created.

(b) Year in which the jobs are available.

(c) 1.8 non-basic jobs will be created per basic mining job.

(d) Non-basic jobs will occur one year after basic jobs are created.

(e) Thirty seven percent (37%) of these non-basic jobs will be filled by women or men who are sharing the same residence.

(f) In the initial staffing of new plants, fifteen percent (15%) of the staff will come from established residents in the area.

ELECTRICAL ENERGY INCREASES

YEAR	COMPANY	INDUSTRIAL USAGE MEGAWATTS	NO. OF NEW RESIDENCES	RESIDENTIAL USAGE* MEGAWATTS	TOTAL MEGAWATTS
1977	Alumet	7.33	66	0.202	7.532
	Simplot	1.00	--	--	1.000
1978	Alumet	--	156	0.477	0.477
1979	Beker	2.00	28	0.086	2.086
1980	Earth Sciences	7.41	81	0.248	7.658
	Beker	--	51	0.156	0.156
1981	Earth Sciences	--	193	0.590	0.590
1982	Alumet	2.20	--	--	2.200
1983		--	--	--	--
1984		--	--	--	--
1985	FMC	--	145	0.444	0.444
1986	FMC	--	261	0.799	0.799
		19.94	981	3.002	22.942

* 95% All Electric @ 27,588 KW = 26,209 KW
5% Conventional @ 12,220 KW = 611 KW
26,820 KWH/YR

$\frac{26,820 \text{ KWH/YR}}{365 \times 24 \times 1000}$ = 0.00306 MW/Residence Mult.

$\frac{3.00 \text{ MW}}{22.9 \text{ MW}}$ = 13% = Residential Loads

$\frac{9.53 \text{ MW}}{22.9 \text{ MW}}$ = 41% = Alumet Loads

Table 2. Electrical Energy Increases

The substantiating facts or premises on the established criteria presented above are as follows:

(a) The number of basic jobs created has been affirmed by the companies involved as regards their current, or present, plans as opposed to the information previously presented in the Draft Environmental Impact Statement.

(b) The year indicated for the new plant facilities or plant expansions are the earliest dates reported to us by the industries concerned.

(c) The value of 1.8 non-basic jobs created by mining employment expansion is taken from the Draft Environmental Impact Statement and is considered to be an accurate figure.

(d) The one year delay in creation or impact on non-basic jobs compared to basic, or mining, jobs is taken from the Draft Environmental Impact Statement.

(e) It would be unreasonable to assume one job creates a new household, and it is evident that more than one person in a household will be working. We have derived a thirty seven percent (37%) factor for number of workers sharing households, and this is taken from the following: Science, Vol. 179, F 16 '73, page 656.

> "According to BLS estimates, the number of women in the work force will rise from 29.2 million in 1968 to 37 million in 1980 (3), an increase roughly paralleling the 26.5 percent increase between 1960 and 1968. Women will contribute 43 percent of the net increase in the labor force between 1968 and 1980 as compared with 60 percent contribution between 1960 and 1968 (4,5). By 1980, women will

> constitute 37 percent of the work force, as compared with 32.1 percent in 1960. Moreover, 43 percent of all women age 16 and over will be in the work force, as compared with 41 percent in 1968 and 37 percent in 1960 (4)."

Our extrapolation of this figure to the overall household work force composition may be questionable, but it forms a quantitative basis for establishing the number of households resulting from basic and non-basic employment.

(f) When we considered the impact on housing, we determined that Alumet would derive nine percent (9%) of their working staff from residents of the Afton, Wyoming area and six percent (6%) from surrounding farms and ranches. Similarly, we concluded that Earth Sciences would be able to obtain fifteen percent (15%) of their staff from existing Bear Lake County residents. In either case, this would represent a decrease of fifteen percent (15%) in the requirement for new residences. In all cases other than Alumet and Earth Sciences, no reserve for existing residences were applied.

The results of the criteria presented and explained above may be found in Table 3.

As previously stated, in determining the projected electrical growth, we have divided our electrical loads into industrial or plant requirements and residential requirements. Once we had established the number and timing of new residence construction, we applied the appropriate annual electrical energy requirement for each residence and established the total electrical load growth due to residences. Industrial (or plant) electrical

Table 3. Housing Increases

HOUSING INCREASES

YEAR	NO. OF BASIC JOBS	NO. OF WORKERS SHARING HOUSEHOLDS	EXISTING HOUSEHOLDS	NO. NON-BASIC JOBS	TOTAL NEW RESIDENCES
1977	138 (1)	51	21	--	66
1978	--	92	--	248	156
1979	45 (2)	17	--	--	28
1980	170 (3)	63	26	--	81
		30		81	51
1981	--	113	--	306	193
1982	--	--	--	--	--
1983	--	--	--	--	--
1984	--	--	--	--	--
1985	230 (4)	85	--	--	145
1986	--	153	--	414	261
TOTALS	583	604	47	1049	981

(1) 108 Personnel - New Alumet Facility
30 Personnel - Simplot Conda Expansion

(2) 45 Personnel - Baker Plant Expansion

(3) 170 Personnel - New Earth Sciences Facility

(4) 230 Personnel - FMC Mining

loads have been derived either from industry sources or our personal knowledge of the process(es).

In determining the annual electrical energy required for each residence, we have assumed that ninety five percent (95%) of all new residences will be totally electrically served. This value has been derived from discussions with representatives of Idaho Power Company and Lower Valley Power and Light Company. The kilowatt hour values used for total electric and for general electrical service to residences is derived from figures obtained from Utah Power and Light Company and from Lower Valley Power and Light Company. Computations have been based on Lower Valley Power and Light Company information since we consider their area of service to be more representative of the climate and geography of the area under study. Lower Valley Power and Light has furnished us with data from 1969 to 1975 and we have been able to establish expected energy use growth over this period and to use this average load growth in our computations. It is significant to note that general use residences have increased their electrical energy usage at a rate of 3.6 percent per year, while total electric residences show an annual decrease in energy usage of 0.9 percent per year since 1969. We have utilized these trends in projecting future residential energy requirements. We believe that the 0.9 percent per year decrease in electrical energy requirements for total electric residences will continue for the short-term forseeable future. The reasons for such a continuing decrease will be better insulation, smaller houses, advanced electrical equipment design, and possible alternative energy sources such as solar energy.

Table 4 and supporting computations indicate the method that we have utilized to determine the average annual electrical energy usage

DEVELOPMENT OF AVERAGE ELECTRICAL ENERGY USAGE (KWH/YR) FOR RESIDENCES

	YEAR	AVERAGE KWH/CONSUMER/YEAR	POWER PERCENTAGE CHANGE/YEAR
Conventional Residences	1969	7872	
	1970	8136	3.3
	1971	8712	7.1
	1972	8784	0.8
	1973	9048	3.0
	1974	9000	0.5
	1975	9612	6.8
All Electric Residences	1969	31,392	
	1970	30,888	-1.6
	1971	31,692	2.6
	1972	30,732	-3.1
	1973	30,384	-1.1
	1974	28,716	-5.8
	1975	29,400	2.4

Average Growth Rate; Conventional Residences, 1969 to 1975
Total KWH/consumer/yr, 1969 to 1975 = 61,164
No. Years: (1969 - 1975) 7 yrs.
Ave. KWH/consumer/year = 8738
Ave. percentage increase; (1969 - 1975) 3.6%
Projected Ave. KWH/consumer/year; 1975 to 1988 @ 3.6%, 12,220

Average Growth Rate: Total Electric Residences, 1969 to 1975
Total KWH/consumer/yr, 1969 to 1975 = 213,204
Ave. KWH/consumer/year = 30,458
Ave. percentage decrease; (1969 - 1975) (-)0.9%
Projected Ave. KWH/consumer/year; 1975 to 1988 @ -0.9%, 27,588

Table 4. Development of Average Electrical Energy Usage for Residences

per residence. Table 4 has been included to indicate the geographical allocation of personnel and residences expected to comprise the Alumet work force.

In conclusion, our research has established that the electrical energy load growth will be significantly less than projected by the Draft Environmental Impact Statement. This reduced growth will also occur over a longer period of time than originally reported.

We feel that the major cause of the reduced growth indicated by our research is attributable to the fact that our updated input information from industrial sources reflects the actual market growth conditions expected by the phosphate industry. Figures presented in the Draft Environmental Impact Statement were not based on market growth or supply and demand analysis and consequently reflect a much higher growth rate than could be normally expected. It should be pointed out that the population growth figures presented in the Draft Environmental Impact Statement are also grossly inaccurate and should be reviewed and updated to reflect current conditions.

The Draft Environmental Impact Statement projected a 270 megawatt electrical load growth by the mid 1980's. Subsequent cancellations of portions of this growth have reduced this to 22.9 megawatts by 1988, or approximately 8½ percent of the original anticipated growth. An example of the relative measure of growth of the Southeastern Idaho phosphate industry over the next 12 years may be found in the 1975 Idaho Power Company Annual Report. In 1975 alone, Idaho Power Company provided power for an additional 97,666 horsepower of irrigation pumping. The equivalent generating capacity to serve this load amounts to approximately 20 megawatts. These figures indicate that the total load growth for the entire phosphate

industry over the next 12 years is approximately equal to the added irrigation pumping load increases on the Idaho Power Company system in one year.

Mitigation of increased phosphate industry electrical load growth is further emphasized by the fact that Alumet has already arranged for an electrical power supply for their proposed plant. The Alumet plant electrical load represents 41 percent of the 22.9 megawatt load growth expected to occur over the next 12 years. The remaining 13.41 megawatt growth will not constitute a load growth problem for the local electrical utility companies.

Graphs 1, 2 and 3 have been included to portray the results of our computed electrical load and residential growth over the years 1975 to 1986. Figure No. 4 shows the new mining loads (1976-1988) in comparison with present and anticipated generating capabilities of Idaho Power Company and Utah Power and Light Company.

124 West Putnam Avenue, Greenwich, Connecticut 06830
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Telex 96-58-62

September 24, 1976

Director
U. S. Geological Survey
109 National Center
Reston, Virginia 22092

Gentlemen:

Beker Industries welcomes the opportunity to submit this statement in response to the draft environmental impact statement for Development of Phosphate Resources in Southeastern Idaho.

The Environmental Impact Statement that will be finalized from this draft document will be the bases for a decision the impact of which will extend far beyond the boundaries of Southeastern Idaho.

Phosphate is a mineral from which fertilizer is manufactured and that fertilizer is used to increase the production of food which is so vitally needed to feed the masses of hungry and starving people of the world. Until some substitute for phosphate fertilizer is discovered, we cannot cut back or stand still on the current production rate of phosphate. We do not suggest that expansion should be conducted without every care for the environment. We have proved that we do care as is evidenced throughout the draft document, however, in completion of the final environmental impact statement, we urge the Task Force to favorably consider the following comments because we believe they will serve to provide more accurate bases for a fair and proper evaluation of the impact of phosphate mining in Southeastern Idaho.

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Mining

On page 1-3 and table 1-1 on page 1-4, it is assumed that the mining production rate would be 15 million tons by 1980 and 20 million tons by 1990. This represents a 10 percent per year increase over the 5-year period from the 1975 production rate of 6 million tons for the 5 active companies in the area. These production rates are far from what the actual market will tolerate.

Responding to a request from the Task Force leader, Beker Industries, in a letter dated August 24, 1976, emphasized the cyclic nature of fertilizer demand and that when the original estimates for product-

1. A discussion of mining at a more probable level of 15 million tons by the year 2000 A.D. has been added to the manuscript.

ion were submitted, the cycle was at its high point. The cycle has indeed progressed and Beker's estimates of mining production have been revised downward. Certainly, an increased production rate of 10 percent is not realistic in light of current conditions and the U. S. Bureau of Mines estimate of between 2 and 3 percent annual rate increase. We believe the final statement should reflect a cyclic industry, but it should not lead to the conclusion that rapid and inflated expansion of phosphate mining will occur and that the peaceful communities in the study area will be subjected to a boom or bust economy and all of the attendant ramifications. Beker Industries does not foresee this expansion and effect, nor do we hear any such projections from other fertilizer manufacturers.

A. Productivity on Revegetated Lands:

One of the major impacts from open pit mining is that of disturbing areas covered by the mine itself and areas covered by waste shale. On page 1-433, it is stated that "long-term productivity of the disturbed lands will be reduced about 50 percent from present levels even with successful revegetation."

Ecology Consultants Inc., in a report on Beker's "Maybe Canyon Phosphate Mine", pointed out that in the Mountain Big Sagebrush/Wheatgrass Associations, which accounts for the majority of the vegetation, the average forage production is approximately 650 #/acre or 68 percent of the site potential of 950 #/acre.

2 In the "Long-Range Operating Plan" by the Caribou National Forest, it is stated that "On the natural sites ground cover which includes rock, vegetation and litter, is approximately 65 percent of the sage grass sites...".

In the required revegetation specifications it is stated "Revegetation will be considered adequate when a minimum ground cover of 67 percent has been maintained for 5 consecutive years over 90 percent of the dump without artificial support". Dump #5 which was reseeded in the fall of 1975, achieved these requirements almost within the first year. We believe we have restored far more than 50 percent of the original productivity through revegetation. This achievement, in addition to our continuing efforts to improve successful revegetation suggests the need for reconsideration of the quoted statement on page 1-433.

In general, there are a number of mitigating measures suggested to relieve the impact in land resources:

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2. The values for the sage-grass communities on the Beker lease are not entirely reflective of the undisturbed, production and ground cover on the entire dump 5 area. Much of the dump was originally aspen stands with production approximately double that of the sage-grass community and with ground cover approaching 100 percent.

The statement that dump 5 was restored for more the 50 percent of the original productivity through revegetation may well be true. However, results to date have been greatly influenced by the fall 1975 fertilization and seeding.

Experience with all types of seedings and fertilization has shown that their effects diminish with time. The 50 percent reduction is production is thus thought to be an accurate approximation of maximum long-term yields that can be expected.

Director
U. S. Geological Survey
September 24, 1976

(1) Brush barriers below dump

(2) Shape dumps with a maximum slope of 3:1

(3) Backfilling of pits

(4) Construction of settling basins to trap suspended solids

(5) Revegetation

(6) Salvage of top soil

We know the various involved agencies are fully aware of our efforts to implement these measures wherever possible.

Wildlife

Much is written in the draft statement about the adverse effects on wildlife, habitat removal, migration routes, etc. caused by mining in the study area. We do not have studied counts of the elk, deer, moose, grouse, bear, etc., but Beker mining personnel who have lived in the area for years are as one in their opinion that the populations mentioned in the statement are exaggerated. The only exception being the coyote because it received very little mention in the report. Yet, sheep ranchers have estimated that 40 to 50 percent of the sheep yearlings lost each year were to coyotes. Many speakers at public hearings expressed similar doubt about the impact that mining will have on wildlife. We do not believe existing mining has had an adverse effect on wildlife and we do not believe the effect of future mining will differ to any degree.

3

Fisheries

On page 5-26, Volume II, it is stated "The proposed South Maybe Canyon Mine will probably lower the quality of the marginal offsite fishery in Maybe Creek". Further, on page 5-32, it is stated "Reduction in quality of the limited fisheries in Maybe Creek probably cannot be avoided during mining". We offer the following to further qualify the terms "marginal" and "limited" as used above; several years ago as beaver food became depleted, they were removed from the area and no fish have been sighted there since the beaver activity stopped two years ago. We would suggest that the best hope for returning fish to Maybe Creek lies in the Beker-built sediment settling ponds at the mouth of the canyon which, after sealing, may retain enough water through winters to succor some trout.

4

3. There is no base line data on wildlife numbers prior to initial mining of phosphate and therefore we do not have complete data on the adverse effect of the existing mining on these wildlife species and numbers.

With the loss of 7,500 acres of wildlife habitat being directly altered because of mining, an additional 1,340 acres altered because of road and railroad development, and an estimated 22,000 human population increase is southeastern Idaho resulting from increase phosphate mining programs, it is obvious many wildlife species will be adversely impacted. The wildlife impacts identified are based on the data available and the knowledge of the wildlife biologists having worked in the area. Sheep ranchers estimates of 40 to 50 percent sheep yearling losses in the past years could be right as the exclusion of toxicants to control coyotes and rabbit numbers being at the low of their cycle most certainly have contributed to sheep depredation by coyotes.

4. The information available on the sediment retention ponds is not sufficient to determine if fish could survive year around in these ponds. Inasmuch as the useful life of these sediment retention basins is not known, it is safe to assume that there will probably be some lowering of the quality of the fishery from long-term increased sediments.

Director
U. S. Geological Survey
Setpember 24, 1976

Archeological and Historic Value

The draft EIS on page 5-23 states "No surveys have been made" as related to South Maybe Canyon mine. The same statement is made on page 5-52 for the Champ mine plan and on page 5-83 for the Mountain Fuel plan.

5

We believe the EIS should acknowledge that field investigations and reports of the archeologist, B. Robert Butler, were completed and submitted on all Beker mining plans, and no significant historic relics were found. These surveys are required for plan approval and must be coordinated with the Idaho State Historic Preservation Officer. The statements that no surveys have been made is inaccurate.

Mineral Resources

On page 5-24 we read "Mining will remove at least 13 million short tons of phosphate rock, which will include 310,400 short tons of uranium, 10,000 short tons of vanadium, and 13,000 short tons of rare earths. Only the phosphate resource will be utilized". The same basic statement is made on page 5-35 under Irreversible and Irretrievable Commitment of Resources with an additional phrase "...which will be removed but not recovered." The logical inference of these statements is that these valuable resources are wasted and lost forever. This is not an accurate conclusion. Wash plant tailings, for example, are concentrates of some of these resources, and we are certain that they will be reclaimed for use, at some future date, and probably with greater ease and minimum impact.

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6

Water Resources

The environmental impact of run-off from pits and dumps has been a major concern of Beker mining personnel in all of their operations. The mitigating measures outlined in the EIS have been utilized wherever possible.

7

We have constructed brush barriers below all dumps where possible. A settling basin has been constructed in Mill Canyon and two others in Maybe Canyon. Additional basins have been proposed by Beker but these have been delayed on request from the Forest Service.

In Chapter V of Volume I, it is suggested that "Potential for unavoidable impacts appear high for...South Maybe Canyon, Dry Valley Creek...". We are not in complete agreement with this observation. Properly constructed basins will substantially mitigate the potential impact and these basins are in process of being constructed.

5. The text has been corrected.

6. It should not be inferred that these resources are wasted or lost forever.

7. Mud and rock slides into Maybe Creek from dumps during the winter of 1975-76, a derailment below the tipple at the crossing of Dry Valley Creek in the spring of 1976 apparently caused by inadequate drainage capacity, and failures of sedimentation dams on the east slope of Aspen Range in 1975 are a few examples which indicate mitigating measures do not avoid all impacts. Some risk appears unavoidable because of poor hydrologic data and for other reasons. "Potential for unavoidable impacts appear high" does not seem to be an overstatement.

Director
U. S. Geological Survey
September 24, 1976

Fertilizer Manufacturing - Sulfur Dioxide

During the early period of Beker's manufacturing operation at Conda, an existing mothballed plant was reactivated and put into operation with few experienced operating and maintenance personnel. Mistakes were made and unfortunately, some sulfur dioxide excursions occurred. The 3-hour and 24-hour ambient air standards were exceeded on several occasions during the period January 1973 through February 1974. These violations are described on page 1-161 of the draft document.

On page 1-160 it is stated "The data from the State of Idaho coulometric monitor at Conda were reported as hourly averages during January and February 1975. During that time, standards were exceeded only once, on January 8, when there were five over-lapping 3-hour periods with average concentrations over 0.5 ppm. That 7-hour period of high concentrations also resulted in a 24-hour average concentration of SO_2 that exceeded the standard." We should like the record to show that the Beker monitor in Conda on January 8, 1975 recorded a 24-hour SO_2 average of 0.01 ppm and no violations of the 3-hour ambient air standard. On that same day, January 8, 1975, the State of Idaho SO_2 ambient air monitor located northwest of the Beker plant recorded a 24-hour SO_2 ambient air level of less than 0.01 ppm and no violation of the 3-hour standard. How then, can the draft environmental impact statement quoted above be substantiated?

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8

We acknowledge the excursions of the SO_2 emission limitations that resulted in ambient air violations through February 1974, but and we wish to emphasize that since that violation of February 11, 1974, there have been no violations of the 3-hour or 24-hour sulfur dioxide ambient air level standards. Moreover, the annual average ambient air levels as recorded on Beker's monitor in Conda for the past three years was 0.014 ppm, less than 50 percent of the very stringent standard of 0.03 ppm. Further, the State of Idaho monitor located northwest of the Beker plant reported no violations of 3-hour or 24-hour ambient air standards and an annual average SO_2 ambient air level of 0.0068 ppm. We are of the opinion that this information should also be included for evaluation in the final EIS.

On page 1-162 data shown indicates sulfur dioxide level concentrations as converted from sulfation plate tests at various distances from the Beker plant during the years 1972 through 1974. The narrative of these data concludes that "The estimated equivalent SO_2 concentrations derived from sulfation results suggest that the annual average SO_2 concentrations within one mile of the plant site equaled or exceeded the ambient standard since the plant reopened. However, as noted

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8. Data originally received from the State of Idaho, Department of Environmental and Community Services, indicated the reported values in excess of standards. These values were checked with the Environmental Engineer, Anthony J. Yankel, from the Department of Health and Welfare, Division of Environment. The previously reported five values of 1.0 ppm were changed in the subsequent printout to 0.01 ppm on January 8, 1975. The text on page 1-160 has been corrected to indicate no values in excess of standards occurred during the January-February 1975 period at the Conda station.

9. Lead sulfation plates were used to measure qualitatively the general distribution of SO_2 near the Beker Plant. According to Huey (1968)* a gross conversion factor of 0.03 may be used to convert sulfation plate results (mg of SO_3/100 cm^2/day) to average SO_2 concentrations in ppm within a factor of three 95% of the time. Since the State of Idaho provided sulfation data primarily (see Table 1-16 on page 1-158 of the DES), the analysis was made on this basis with the factor of three used for best case-worst case.

As noted in the above response, the Beker plant did not have an SO_2 violation in January or February of 1975. The Environmental Engineer from the State of Idaho, Department of Health and Welfare, further advised that there were no SO_2 violations at the Beker Plant during the remainder of 1975.

*Huey, N.A., 1968: The lead dioxide estimation of sulfur dioxide pollution. Journal of the Air Pollution Control Association. 18, 9, 610-611.

earlier, the conversion is not exact and may be only accurate within a factor of 3". On page 1-163 the statement is made "The sulfation rate data are not conclusive, however, because of uncertainties in the relationship between sulfation and ambient SO_2 concentrations". On that same page, 1-163, it is concluded "Sulfation rate data collected near these plants suggest that both may also be violating the annual SO_2 standard within a distance of a few miles."

As stated previously, actual ambient air levels recorded on SO_2 monitors in Conda by Beker and northwest of the plant by the State of Idaho indicate that our plant is not violating the SO_2 ambient air standards. In fact, these actual annual average SO_2 ambient air levels are approximately one-third (1/3) of the converted sulfation rate data indicated in the table on page 1-162 for 1974 at a distance of up to one mile from the plant.

9

We would agree that the sulfation rate data that was collected would be useful in continuing attempts to perfect the SO_2 conversion relationship, but we cannot agree with the inferred conclusions of ambient air violations, even when tempered with the words "suggested" or "may". We would be pleased to provide our ambient air data to assist the Task Force in assigning the true impact of SO_2 emissions from our plant at Conda on air quality.

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Particulates

At the bottom of page 1-164 there is a table of annual geometric mean suspended particulate concentrations as monitored at three different sampling sites. Site SS3 is located in Conda 0.9 mile southsoutheast of the Beker plant. Suspended particulate ambient air concentrations sampled at this site during 1972, 1973 and 1974 indicate excesses during those years. On page 1-165 it is concluded "In summary, sampling for suspended particulate has shown that both the secondary and primary standards were violated for several years near the FMC-Simplot complex at Pocatello and near the Beker-Simplot complex at Conda." The inference to be deduced from this language and the table is that the concentrations recorded were solely attributable to the operations of the companies mentioned. The sampling device at site SS3 was positioned on top of the post office in Conda where any amount of particulate generated from local activities, traffic, etc. would be a part of the sample result. It is our understanding that this location was eventually deemed inappropriate for the intended purpose and the sampling station was changed. We do not quarrel with the conclusion that particulate ambient air level readings were in excess of the standard, but we do object to the implied inference, but virtue of the complete silence on other substantial source contributions, that fertilizer manufacturing plant operations were the sole cause of the particulate ambient air violations at that monitoring site.

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10. On page 2-1 of Reference 19 (North American Weather Consultants, 1975) the following statement was made, and should be used to introduce the section on particulates beginning on page 1-163:

"Total suspended particulates. Measurements of concentrations of TSP necessarily include area sources (i.e. dirt roads, construction, street repair) as well as emissions from industrial sources. In the EPA Region X report on Air Quality Profile for Power/Bannock Primary Abatement Area, the category "dirt roads" was listed in the emission inventory as responsible for nearly 57 percent of all particulate emissions."

A statement to this effect has been added to the text.

Director
U. S. Geological Survey
September 24, 1976

Impacts - Air Resources

On page 1-364 it is stated "The primary impact on air quality attributable to the development of phosphate resources in southeastern Idaho would be from the growth of existing plants."

Tables 1-37 and 1-42 delineate the results of modeling of the air quality. On page 1-364 it is concluded "The data indicate that both fertilizer plants, Simplot at Pocatello and Beker at Conda, would exceed the ambient on standards for both Class I and Class II for SO_2 in 1985 and 1995. The projected maximum annual average concentration (we presume ambient air level) of SO_2 emissions from the Beker plant is stated in table 1-37 to be 0.049 ppm in 1985 and 1995.

If the 0.049 ppm figure is meant to be the annual average SO_2 ambient air level, we are at a loss to understand how it was determined and even further amazed at our ability to flaunt the Class I and II standards as well as national ambient standard without concern by enforcement agencies. If our existing source were to expand, such expansion would be contingent on compliance with new source standards and non-deterioration requirements. In all probability, we would not be permitted to emit more SO_2 in 1985 than we are at the present time. If that probability is true, on what basis would the Beker plant emit SO_2 to effect ambient air levels as suggested in table 1-37?

11

It is clear that if Beker's SO_2 emissions caused a violation of the national ambient air standard, as would be the case if the ambient air level were 0.049 ppm, those emissions would also violate Class I and II standards. However, we do not now violate ambient air standards and do not expect to violate them in 1985.

We are also puzzled by the statement that the Beker plant would exceed the ambient on air standards for both Class I and II for SO_2 for 1985 and 1995. It is our understanding that the baseline for Class II would be derived by taking ambient levels of existing sources and adding those of certain additional construction during a specified time period. If our emissions are included in the baseline, and we do not increase the amount, how and/or why should we violate the standard? Even if some expansion took place on the Beker plant, it would be required to meet incremental increases and probably a reduction of emission from the existing source would be required to prove a zero net increase.

12

11. The production figures showed the Beker Plant at Conda increasing its production rate from 1975 to 1985 and 1995 by a factor of 5/3. Based on this factor, the annual average concentrations were computed as shown in Table 1-37. Modeling from current production figures yielded the results shown in Table 1-42.

A statement has been added to amplify the procedure used.

12. The following is quoted from EPA's Environmental Law and Regulation Comments-Air contained in a letter to the Director of the U.S. Geological Survey dated July 23, 1976:

"Prevention of Significant Deterioration (PSD)

PSD regulations apply to phosphate rock processing plants and sulfuric acid plants, the construction or modification of which was commenced any time after June 1, 1975. For S.E. Idaho, stationary sources may not violate the Class II increments listed in 40 CFR 52.21 for particulate matter and sulfur dioxide. These are incremented levels which signify the maximum allowable increase for an area."

The previous "baseline" concept originally proposed in the 1974 version of the PSD regulations is no longer contained in the latest version of these regulations (40 CFR 52.21).

Director
U. S. Geological Survey
September 24, 1976

The table on pages 1-369 and 1-370 show an "E" against Beker and the explanation of "E" "indicates an excess of national standards in 1975". If this means we violated the 3-hour or 24-hour or annual average ambient air level in 1975, we object as repeatedly we have previously stated no such violations occurred. On the other hand, if the "E" means a violation of Class I and II standards in 1975, we object because the area is not Class I and such limits did not apply in 1975.

13.

Fluorides

It is stated on page 1-166 "Volatile fluorides vaporizing from the ponds are not controlled and may constitute 90 percent or more of the total fluoride emissions to the atmosphere from the (phosphate) industry...". The Environmental Protection Agency considers emissions from ponds as a variable between 0.15 and 5.0 pounds per acre day. A study done by Messrs. King and Farrell conclude emissions from ponds could vary from 0.7 to 10 pounds per acre day. One could conclude that the amount of fluoride emission from ponds is one that has not been adequately quantified and the suggestion that these emissions may constitute 90 percent or more is more exacting than we believe warranted.

14.

The final EIS should also include the observation that existing source fluoride standards have been promulgated and will be implemented in 1978. Compliance with standards will substantially reduce the emission of fluoride to the atmosphere from manufacturing sources, thus reducing the impact of vegetation.

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General Observations

The spectacular growth of phosphate mining as depicted in the draft environmental impact statement is not typical of that anticipated by industry - a revision of the tonnages would certainly be in order. Likewise, the environmental impact from the anticipated mining will be substantially lessened.

15.

It is indeed unfortunate that a document of this importance should be critized to the degree that it has at public hearings because of the seeming unconcern for the benefits that will accrue to the people of Idaho as opposed to the impacts on some trees, wildlife and a few birds. We have mined in the area and we know the land will be impacted to some degree, but we also know that which can be done and is done to lessen those impacts to an absolute minimum. Mining people are as much concerned as the most avid environmentalist about preservation of the area's land, air and water resources, but

13. The tables show projected violations based on calculated maximum impact levels for 1985 and 1995.

"E" indicates will be in excess of Significant Deterioration Standards that were in effect in 1975. The text has been modified accordingly.

14. It is true that the accuracy of the 90% figure given by the National Research Council document (1970) has been subject to question. However, the statement is qualified by the use of the word may.

Standards for fluoride emissions are included in the Idaho regulations, but there are as yet no Federal standards for fluorides. EPA has drafted guidelines for states to develop regulations to control fluoride emissions from existing fertilizer plants. When promulgated, States will have nine months to submit the necessary regulations.

It is not clear from the second paragraph of the comment whether Federal or State standards for fluorides have been promulgated to be effective in 1978.

15. A discussion of mining at a more probable level of 15 million tons by the year 2000 A.D. has been added to the manuscript.

Director
U. S. Geological Survey
September 24, 1976

unlike the environmentalist, they realize the vital importance of phosphate to man, thus exercising their skills to yield a maximum benefit to both.

Processing of the phosphate ore to useable fertilizer involves procedures that also impact the air and water to some degree; however, development of improved abatement controls have reduced these impacts. Compliance with ever-increasing governmental regulations will require a reduction of emissions from Beker facilities, thereby leading to an improvement in air and water quality.

We would urge the Task Force to include in the final environmental impact statement some of the concern that was expressed at public hearings by the people who are truly effected by the phosphate industry. The deer, elk, birds and fish will be impacted to some degree, but without this industry and an orderly expansion of this industry, the impact on the economy of the area will far outreach anything described in the draft statement.

Respectfully submitted,

Edward T. Drill
Director Safety and
Environmental Affairs

ETD/ad

EARTH SCIENCES, Inc.

Highway 93, North • Golden, Colorado 80401 • 303 279-7641

September 28, 1976

Mr. Terry Narten
EIS - Phosphate Development
Southeastern Idaho
USGS
760 National Center
Reston, Virginia 22092

Dear Mr. Narten:

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This correspondence is in reference to the Draft EIS on the Development of Phosphate Resources in Southeast Idaho. Earth Sciences, Inc. (ESI) proposes an underground mine west of Bloomington, in Bear Lake County.

While for the most part the EIS fairly represents the nature of the project, not nearly enough emphasis has been placed on two very important and overriding factors:

1. The project is almost exclusively non-Federal. As the EIS suggests, but fails to capitalize on, mining could and will occur with or without Federal minerals. The efficiency of operations, i.e. optimization of mineral extraction, is increased by the use of Federal phosphate. But, the key point is that no Federal lands or waters will be any way directly or indirectly affected by the proposed operation.

2. Despite all of the references to possible ESI extraction of vanadium, silver, lead, zinc, selenium, and numerous other minerals, the fact remains that ESI has proposed a phosphate mine, and phosphate is the only Federally reserved mineral in the deposit. No plans have been issued by ESI to extract or process any mineral other than phosphate; only the extraction (mining) of phosphate is relevant to this EIS. All references to other assumed mines or processing plants should be deleted from the EIS.

1. A statement to this effect has been added to the text.

2. Although the lease covers phosphate, an analysis of impacts of mining on the lease validly include those of secondary nature such as by-product recovery and processing. In January, 1975, Earth Sciences stated to the Task Force that the mining project is aimed at recovery of phosphate and vanadium, and that consideration is also being given to recovering zinc, silver, and possibly selenium. Accordingly, these have been considered as possible by-product recovery.

ESI has some concerns about specific statements made in the EIS, about which comments are hereunder presented:

3. Page 1-111, Para. 2: The reference to likely ground water problems at the Paris-Bloomington Mine is totally unsubstantiated by any facts or data. Generalizations without factual basis do not belong in a document which serves as an important decision-making tool.

4. Page 3-29, Para. 4: Construction of transportation facilities will not occur in proximity to either Bloomington or Paris Creeks. No map of transportation network has been submitted to the Task Force; upon what basis was the assumption concerning their location and impacts made?

5. Page 6-15, Para. 5: Reference to sandhill cranes "in the area" is meaningless; the hill area of the minesite offers no habitat for sandhill cranes. The cranes inhabit the wildlife refuge 4-5 miles southeast of the property.

6. Page 6-16, Para. 2: No cultivated land is in the area of the mine; all land is grazed only.

7. Page 6-21, Para. 3: No calciner ponds are proposed by ESI. Beneficiation tailings ponds are likely, but contain no high concentrations of toxic materials and no nitrates. The nitrates in the pond at Conda probably are from sewage disposal.

8. Page 6-27, Para. 3: No evidence is available to suggest that the water table will be lowered; test mining in the private reserves has revealed only very small amounts of water. None is discharged to any creek. No sedimentation will occur.

3. This is meant to be a general statement in reference to regional conditions. Detailed discussion is given in Parts 4 and 6. Reports furnished by the mining company anticipate problems. Page 145, "Preliminary Environmental Impact Assessment, Bloomington Phosphate Project" prepared for Earth Sciences, Inc., by VTN states, "Impacts on ground water will include the disruption of the hydrologic flow regime and increased drainage of subsurface water ... a temporary, but probably not permanent, drawdown of the existing water table, (and) ground water quality degradation may result from heavy metal contamination." Page 152 states, "areas of ground water recharge could be disturbed to the extent that recharges from those areas no longer occur." The Task Force concurs in this analysis.

4. Since Earth Sciences, Inc. did not submit a complete mining plan showing all transportation routes needed to serve the proposed operation, general assessments had to be made. This paragraph states, "Construction of the proposed transportation system in the Paris-Bloomington-Montpelier area will degrade the streams." No reference was made specifically regarding Paris or Bloomington Creeks.

The Task Force did receive a preliminary alignment and profile from the Union Pacific Railroad Company showing the proposed railroad route from Montpelier to the Paris-Bloomington area that would serve the proposed mining operations. This part of the DEIS directly applies to the railroad proposal and not site specific transportation requirements that are discussed in Part 6. Construction of this railroad spur will degrade the streams and the degree and duration of the impact will depend on those environmental precautions incorporated in the construction program. The lower reach of Paris Creek and the Bear River could be affected.

5. Sandhill cranes utilize the Paris-Bloomington Canyon open areas for feeding. They fly out of the marsh habitat to upland, dry land habitats to feed.

6. Although the text does not state that there is cultivated land on the leasehold, it has been amplified for clarity.

7. At a meeting with the Task Force in January, 1975, ESI stated that it proposed to ship about one million tons of calcined rock from the minesite annually. No subsequent change in plans has been received by the Task Force from ESI.

8. VTN's "Preliminary Environmental Impact Assessment, Bloomington Phosphate Project, Bloomington, Idaho" prepared for Earth Sciences, Inc., 1975, states on page 108, "The construction of roads, buildings, etc., will remove vegetation, disturb existing soil conditions and alter existing runoff drainage patterns. The greatest impacts from the mining operation will be increased erosion from disturbed areas..." Also, on page 108, "Surface water from rain storms and snowmelt may carry petroleum residues, suspended soils, and metals away from the mines and into the streams." The Task Force concurs in this analysis.

9. The plant impacts cannot be determined at this time because neither the exact process nor site have been selected. A zero discharge plant will have no impact on water quality, regardless of site.

10. Page 6-28, Para. 1: No deer will be displaced because no significant area (17 acres) will be disturbed. These areas will not be the prime wintering range to begin with. If only 17 total acres are disturbed, how can 70 acres of grouse habitat be unavoidably lost? A zero discharge of wastewater will prevent any fish population losses.

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EARTH SCIENCES, Inc.

Erosion and sedimentation occur from all exposed soil and rock surfaces to some extent. Newly disturbed surfaces erode and produce sediment at a much higher rate than older surfaces. The construction of access roads, parking facilities, and a waste rock pile will create new, highly erodible surfaces that will produce sediment. It is very difficult to prevent all sediment from reaching the nearby Bloomington Creek. Rehabilitation is anticipated; however, it is not expected that rehabilitation will be accomplished in less than three years after cessation of disturbance. Rehabilitated slopes are not likely to attain as much erosion protection as is found on undisturbed slopes unless fertilization and irrigation are provided for many years.

While regulations and demands may encourage the application of erosion and sediment-control efforts, erosion and sedimentation will occur; and complete control is nearly impossible to attain.

9. Construction of the proposed processing plant will probably have a short-term impact on sediment loads to neighboring streams regardless of the site or design. The processing design and the zero discharge would indicate no long-term low impact on chemical quality and suspended sediments in the streams. The existence of mine tailings exposed to wind erosion, however, have historically led to long-term low impacts on water quality.

10. Approximately 17 to 20 acres of habitat for deer and sagegrouse will be disturbed in the Paris-Bloomington Canyon area. However, the associated mining activities will exceed the behavior tolerance of deer and sagegrouse and based upon topography (slope exposure available habitat adjacent to the mining location, etc.) approximately 70 acres will be unsuitable for these species during the life of the mine.

The associated road, mine dump, and other soil disturbances above Paris and Bloomington Creek will result in increased silting and higher turbidity. This will cause moderate reductions in fish populations depending on the severity of the water quality impact even though there will be zero discharge of waste water from the mining area.

11 Page 6-30, Para. 2 & 3: Electrical power consumption figures are incorrect. The maximum load will be approximately 120 million kwh (16 MW).

12 All references to the proposed plant and minerals other than phosphate should be deleted.

If there are any questions, please feel free to call me at (303) 279-7641.

Very truly yours,

EARTH SCIENCES, INC.

J. H. Viellenave
Project Manager

JHV/kc/272

11. Revised figures have been submitted. The text has been revised accordingly.

12. See response to comment number 2.

FMC Corporation

Chemical Group Headquarters
2000 Market Street
Philadelphia Pennsylvania 19103
(215) 299 6000

September 28, 1976

Director, United States Geological Survey
National Center
Mail Stop 108
Reston, Virginia 22092

Dear Sir:

1 FMC has serious concerns about the draft Environmental Impact Statement on the development of phosphate resources in Southeastern Idaho. As our oral testimony in Pocatello on July 7 and 8 indicated, we are concerned about the basis of the entire EIS--the erroneously high industry expansion rate. This insupportable growth rate in turn has resulted in overstated environmental pressures and excessive population estimates.

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2 No attempt has been made to unwind the phosphate related growth from the general area growth in the EIS, nor has any effort been made to put the entire impact of the industry on the area into perspective. The economic benefits that will accrue to the area through orderly development of the phosphate reserves have not been evaluated. The economic consequences of alternate courses of action have not been considered.

We were dismayed to discover serious errors in both the general technical discussion and in the specific presentation of our mine plan. These deficiencies are discussed separately in attachments to this letter.

Sincerely yours,

A. R. Conroy/mjkr

A. R. Conroy, Manager
FMC Corporation
Mineral Development Department
609 W. Maple
Pocatello, Idaho 83201

T622A1
JC20

1. A discussion of mining at a more probable level of 15 million tons by the year 2000 has been added to the text.

2. The anticipated growth from phosphate development is clearly separated from the overall growth in the socioeconomic section as well as in other sections where overall growth is considered along with that of the phosphate industry.

APPENDIX I General Comments.

We are disturbed by the lack of references throughout the entire report. No references make it impossible for the reader to check conclusions made in the text. For example, on P-1-42, paragraph 4, a potential evapo-transpiration rate is cited without any indication on how the number was calculated or where the reader can find the calculation method used.

APPENDIX II Specific Comments on Volume I, Part 1.

	Page	Paragraph		
3	P-1	2	"annual production .... may exceed 15 MM T by 1980". This is not possible because at least four years lead time is required to open each new mine. Also, there is no market demand base to support such growth. See the detailed comments concerning pages 1-25 to 1-29 on market control of developments and FMC's oral testimony.	3. A discussion of mining at a more probable level of 15 million tons by the year 2000 A.D. has been added to the manuscript.
4	1-2	1	"Increased demand for phosphate ... and the projected decline of Florida production indicates a probable substantial increase in production from the western phosphate field". This will not be true if Morocco and the Spanish Sahara absorb the export market now supplied by Florida; again, refer to our comments concerning pages 1-25 to 1-29.	4. See response to comment #3.
5	1-3	2	"....15 million tons by 1980 and 20 million tons by 1990" is not possible, as discussed under P-1, paragraph 2.	5. See response to comment #3.
6	1-4	Table 1-1	The timing of developments shown in this table is far too rapid. We can only specifically address FMC's schedule for the Dry Valley mine. It is incorrect for the following reasons:	6. See response to comment #3.

Page	Paragraph		
1-4 (cont'd)	Table 1-1	FMC now obtains phosphate ore from the Gay Mine on the Fort Hall Indian Reservation. Our present drilling information indicates that sufficient reserves remain at Fort Hall to sustain current levels of operation at least into the early 1990's, and possibly into the turn of the century. We will begin mining at Dry Valley a few years before mining is completed at the Gay Mine so that the new ore can be thoroughly tested in our Pocatello plant prior to total dependence on this new ore source. The timing of this move will depend on the ultimate ore reserve proven at Fort Hall. It could range anywhere from the late 1980's to the mid or late 1990's. In addition, any projected production schedule for our Dry Valley Mine should assume that the mine production rate will begin at a low level (perhaps 200,000 T/year) and be phased into full production (2,000,000 T/year) over a period of three to five years.	7. On January 31, 1975 at a meeting with the Task Force, Mr. Conroy stated that FMC Dry Valley mine might be brought into production "now or not for 10 years". This was taken as outside limits of the time of start-up, and the mid point (1981) was used in the DES. The mining plan gives annual production rates of 0.3 to 2.5 million tons per year with no reference to a transition period. However, Mr. Conroy also stated that production was anticipated to be two million tons per year, which could be expanded by 25 percent. The Task Force assumptions in the draft statement were based on these statements.
1-6	3	It is highly unlikely that FMC will build a beneficiation plant in Dry Valley. Our present knowledge of the Dry Valley ore body indicates that a nominal 25% P_2O_5 ore, suitable for feed to our elemental phosphorus plant, can be obtained by mining and blending all material in the deposit containing over 16% P_2O_5. We have no need to beneficiate low-grade rock to provide furnace feed. Therefore, we see no justification for inclusion in the impact statement of an FMC beneficiation plant at Dry Valley.	8. In January, 1975, at a meeting of FMC representatives with the Task Force, FMC officials stated that beneficiation of rock at the minesite for ultimate conversion to fertilizer was under consideration. Accordingly, it was included in analysis of impacts in the DES. It has not been considered in the analyses of impacts at a more probable level of mining which has been included in this FES.
1-7	Table	Omit FMC beneficiation plant.	
1-9	Fig. 1-2	Omit FMC beneficiation plant.	
1-10	Table 1-2	Omit FMC beneficiation plant.	

Page	Paragraph		
1-24	4	"Investments in phosphate mines and plants in the area exceed $500 million." These investments were calculated to be $654,725,000 in 1966 (Idaho Phosphate Lands Conference report to the Public Land Law Review Commission, entitled "The Economic Importance of the Western Phosphate Industry", 1966). The total investment probably now approaches one billion dollars.	9. The text has been corrected to reflect these more exact figures.
1-25 through 1-29	all	FMC presented oral testimony, largely devoted to western phosphate supply/demand forecasts and their effect on industry growth in Southeast Idaho, at the Public Hearings held in Pocatello, Idaho, on June 7 and 8, 1976. The following is a more detailed discussion of this subject which has not received sufficient attention in the two impact statements. A. Introduction FMC Corporation seriously doubts that phosphate industry expansion in Southeast Idaho can occur at anywhere near the rate projected in the draft Environmental Impact Statement. Consequently, we feel that the social and environmental impacts of phosphate development in the foreseeable future will be substantially less than projected. The mine plans submitted by industry in 1974 were developed under an unusual set of temporary and artificial circumstances which had no relationship to long-term phosphate market demand projections. B. Background 1. By early 1974 it became apparent that world phosphate production capacity had fallen behind demand; shortages developed and phosphate prices escalated at unprecedented rates. All of the major Idaho	10. We concur. A discussion of mining at a more probable level of 15 million tons by the year 2000 A.D. has been added to the text.

phosphate producers, as well as several newcomers, began market and economic analyses to determine whether the apparent sudden market boom and price strength would justify investment in new production facilities. Numerous prospecting permit applications were filed in 1974 and early 1975 to establish phosphate reserve positions to support entry by new companies into what appeared to be a rapidly growing market.

2. All of these activities resulted in imposition of the two-year moratorium on new mine development and establishment of the Federal Task Force late in 1974. The Task Force contacted all local phosphate industry operators and requested submission of detailed mining and reclamation plans for all possible mine expansions over the next 25 years.

3. The apparent market and economic incentives at that time, coupled with the constraints set by the Task Force for submission of mine plans, led the industry to the conclusion that it should submit the maximum possible number of mine plans to cover all possible contingencies. FMC seriously considered submitting three mine plans at that time. However, manpower and time limitations prohibited preparation of three mine plans and a single plan for Dry Valley was ultimately submitted.

C. Why is the "Maximum Expansion" Case Projected by the EIS Unrealistic?

1. 1975 clearly showed that the 1973-1974 market boom and shortage situation was a short-term upset in the long-term supply-demand trend.

Severe short-term market cycles, such as we saw during the past three years, have occurred before and may occur again, but the long-term development of the western phosphate industry will generally follow the growth in demand for food and chemicals which can be served economically from its isolated location.

2. The attached graph compares the U.S. Bureau of Mines supply-demand projections for the western phosphate industry with the supply projections made in the Environmental Impact Statement and our own projections of the "most likely" rate of growth in the west.

a. The bottom curve shows the projected growth in domestic demand for all phosphate products derived from western phosphate rock. The curve predicts that consumption of these products in United States markets will grow from about 4.5 million tons per year of rock equivalent in 1973 to about 6.5 million tons per year by the year 2000. This represents a demand growth rate of only 1.2% per year.

b. The Bureau of Mines supply curve, on the other hand (fourth curve from the bottom), projects growth in production capacity from about 5.5 million tons in 1973 to 15 million tons per year in 2000, or at a rate of 3.8% per year. The difference between the domestic demand curve and the supply curve represents the projected growth of exports. We are currently exporting a little over one million tons of phosphate rock equivalent from the west per year. The Bureau of Mines projects western exports to grow to about 8.5 million tons per year by 2000. We feel that this projection is over-optimistic.

Most of the phosphate exported from the Idaho area is in the form of fertilizers, and most of this goes to western Canada. The Bureau of Mines supply projection assumes that Idaho phosphate products will capture an increasing share of other world markets as Florida reserves are depleted. We do not believe this. Depletion of Florida reserves over the next 25 years is more likely to result in greater penetration of world markets by Morocco and other north African countries because this is where the bulk of world reserves are located and they are accessible to cheap ocean freight.

The great difference that exists in the cost of freight by rail versus ship will undoubtedly continue and will maintain the economic barrier which now blocks major export shipments out of Idaho. Idaho fertilizer producers now compete with the Florida producers for sales on our own West Coast and in western Canada. It is cheaper to ship bulk phosphate products by boat from Florida to the West Coast than it is to ship by rail from Pocatello to San Francisco.

Because of freight economics we believe that the western phosphate export business will be largely confined to the western Canadian market and, therefore, will not grow at the rate projected by the Bureau of Mines. Our own estimate of the most likely range of supply growth in the west is shown by the hatched area on the graph representing growth rates somewhere between 2.0% and 2.7% per year.

c. The top curve represents the growth projected by the Environmental Impact Statement based on assumed full development of most of the mine plans by 1980. In view of the foregoing discussion, we think it is apparent that the fertilizer and phosphate chemical markets cannot possibly support such growth in Southeast Idaho.

D. Summary

In summary, FMC believes that phosphate development in Southeast Idaho will be limited by total domestic and export market growth on the order of 2.5% per year over the next 25 years. Impacts from development at this rate will occur gradually and should be controllable through orderly expansion of existing social and environmental management services.

	Page	Paragraph		
11	1-57 and 58		Table 1-6 is entirely unintelligible. We suggest that it be reorganized to go from the estimate of the total phosphate underlying the area through the total recoverable to the total economically strippable, with the assumptions as to the mining depth carefully documented.	11. In the preparation of the DES, the Task Force considered several methods of presenting these data. The table as shown is considered the most appropriate. The reserve estimates that have been made by several people are presented first because they are considered to be of most interest.
12	1-62	1	The Task Force should carefully differentiate between significant resources and economically recoverable resources. For example, on this page, in the discussion of Earth Sciences plans, obviously the selenium is an economically recoverable resource, but the cadmium in the ore is not economically recoverable. This point is especially important with the element fluorine. At present, the fluorine resource in the phosphate ore is significant but not economically recoverable.	12. The text has been revised to differentiate between significant resources and economically recoverable resources.
233	1-93	Figures	Please see our comments on pp 1-186-189. The comments on the quality of those curves holds for these also. The lead curve is an especially disturbing example of careless curve fitting. Our experience, tabled below, is that lead concentration increases with proximity to roadways, not with proximity to phosphate plants.	13. The curves shown are logarithmic regressions statistically significant at the 95 percent or higher confidence level. This can hardly be considered careless curve fitting. The Task Force agrees that lead increases with proximity to roadways, but we are unable to understand the data presented. Are these values for samples adjacent to roadways at the stated distances from the plant? It should also be noted that the concentrations of lead along roadways is confined to a couple hundred feet adjacent to the roadway; our samples were obtained in open fields sufficiently distant from this influence. The levels of tested elements in the soils were judged to be unusually high in the vicinity of the processing plants as compared with those considered to be near-background levels at 50 kilometers from the plants. The text has been amplified to reflect this comparison.
13			Distance from Pocatello Phosphate Complex / PPM Lead 0 - 0.75 Miles — 39 0.8 - 1.5 Miles — 29 >1.5 Miles — 54 Samples by FMC Pocatello in 1974.	
	1-94	1	"The levels were judged to be unusually high". The text does not indicate by whom and on what basis. Conclusions such as this should be carefully documented.	

	Page	Paragraph		
14	1-96	1	Only portions of Dry Valley Creek are perennial; major sections of the stream dry up (or are absorbed in the valley fill) during the summer months.	14. This is correct. The text has been changed to reflect that only portions of Dry Valley Creek and Angus Creek are perennial.
15	1-108 1-109 Fig. 1-14	3	The hydrologic interpretation shown indicates that ground water drains toward the center of Dry Valley from Schmid Ridge on the west and Dry Ridge on the east. Recent hydrologic studies by the Idaho Bureau of Mines, "Solutions to Water Resource Problems Associated with Open Pit Mining in the Phosphate Area of Southeastern Idaho": Progress Report, March 1976, by Dr. Ralston et al, Idaho Bureau of Mines and Geology, and FMC indicate that ground water actually drains away from the valley and is controlled by the east and west dips of the sediments exposed on either side of the valley.	15. This illustration is purely hypothetical, as stated in the title; its intent is only to show the complex geology and many paths that ground water flow might take. The illustration has been modified to reflect the data made available subsequent to the DES.
16	1-117	5	Environmental Impact Statement: "..., the FMC plant withdrew about 3500 gpm (5,650 acre feet per year) and discharged 2,000 gpm (3,230 acre feet per year),..." Background Information: In 1974 this statement was correct; however, many conservation improvements have taken place since 1974. Corrected Statement: The FMC plant withdraws now and will in the future about 2200 gpm (3550 acre feet per year) and discharges 1100 gpm (1775 acre feet per year).	16. The text has been modified to incorporate these new data.
17	1-132	Table	The tabled uranium content of Becker's outfall seems to be misprinted.	17. The units for the concentrations in the solution (micrograms per liter) were used to be consistent with the way the same elements are reported in aqueous solutions throughout the report.
18	1-138	Table	The units for the elements cadmium through zinc in this table seem to be incorrect. The correct unit should be micrograms per liter.	18. The units have been corrected in the table.

Page	Paragraph		
1-140	Table	Environmental Impact Statement: "Based on average of 2.616 million gal. per day for period May to mid-October, 1974 (USGS)." Background: From our daily records kept for that period, the average daily discharge was 2.608 million gal/day, or 1811 gpm; however, conservation measures have now been implemented since then. The EIS statement, 1817 gpm, contradicts the first EIS statement made on 1-117 of 2000 gpm discharge. Corrected: FMC's average daily discharge during January 1 to April 30, 1976, was 1.556 million gal/day, or 1080 gpm ±135 gpm.	19. The figure has been changed to 2.608 mgd. The 1974 data are necessary as they are used in the accompanying computations.
1-148	3	FMC recently made a Pocatello area water survey. The highest zinc analysis was 1.04 mg/L which was in a well remote from the phosphate plants (the average zinc analysis for the 23 samples collected was 0.21 mg/L, ranging from 0.01 to 1.04 mg/L). We fail to understand why the Task Force chose the units they did since drinking water standards for zinc are 5 mg/L. This level is based on taste considerations and not toxicity. It would have been less cumbersome to report the analysis as 1 mg/L, but, of course, this number doesn't have the shock effect that the equivalent 1000 μg/L has.	20. Because of galvanized metal piping, sampling for zinc presents a possible contamination problem. It is quite possible that the value we reported (1000 µg/l) represents such a sampling error. The use of µg/l instead of mg/l was for consistency with units used elsewhere in the report for concentrations of trace metals in aqueous solutions.
1-167 1-168	2 2	The equation giving the relationship between fluoride in vegetation and ambient air concentrations appears to be (again no checkable reference) identical to that given in a paper "Characterization of Atmospheric Fluorides and Their Accumulation in the Food Chain of Dairy Cattle: A Field Study in the Vicinity of an Alumina Reduction Plant" (in Maryland) by Gerhard Isreal, Technical note BN-764, April, 1973, University of Maryland, Institute for Fluid Dynamics and Applied Mathematics. The relationship looked great for Maryland.	21. The reference to the formula on page 1-167 is Isreal, G. W., 1974: A field study of the correlation of statis lime paper samples with forage and cattle urine. As was noted on page 1-167 of the DES, the value for K is the same as that used in Reference 20, EPA Doc. TR-74-103-01 which was a study made of SO_2 and fluoride emissions at Conda, Idaho. The bottom paragraph on page 1-166, continuing on the top of page 1-167, confirm the lengthy statement by FMC that vegetative measurements of fluoride concentrations do not necessarily indicate average fluoride concentrations in the ambient air since many variable, particularly rainfall, are important factors.

The empirical relation and the empirical K factor must be re-determined under the atmospheric and agricultural factors for Idaho; if the K factor given in the EPA study was adjusted it cannot be determined from the EIS text.

The information on vegetation fluoride levels is but another example of the superficial examination made into the multitude of factors involved in preparing the impact statement. The 1974 fluoride levels were the highest experienced in recent years. This was the case in Pocatello, Soda Springs, and Provo, Utah. The in-depth evaluation made of this situation concluded that the elevated levels were the result of the unusually dry season rather than increase in emissions from the industries. The historical information gathered by FMC points out how unusual the third harvest 1974 values were.

21

AREA ENCLOSED BY 40 PPM ISOFLUORS
Square Miles

Year	First Harvest	Second Harvest	Third Harvest	Season Average
1968	6.8	13.4	14.3	11.6
1969	4.2	8.0	12.0	8.1
1970	6.3	13.2	15.6	11.7
1971	4.1	9.2	11.5	8.2
1972	8.1	7.1	13.5	9.6
1973	7.7	6.1	11.2	8.3
1974	7.9	16.1	30.4	18.1
1975	8.9	9.7	15.4	11.3

The values found in the harvest samplings are influenced by temperature, rainfall or irrigation practices, growth rates, ambient air fluoride concentrations, etc. The 1974 season was unusally dry with precipitation during June through September being just 0.38 inches, or 13% of normal.

Page	Paragraph		
21		A similar situation was developing in 1975 with rainfall in August and September at 0.05 inches, which is 3% of normal. FMC has demonstrated that fluoride concentrations in range grass which has been exposed during the winter season shows an inverse relationship to precipitation, i.e., the drier the winter, the higher the fluoride concentrations in the range grass. Attempts to correlate growing season isofluor areas or average range grass concentrations with precipitation over the past seven seasons resulted in essentially no correlation. Thus, it may be concluded that other factors masked the effects of precipitation during the growing season. However, during extremely dry seasons, the lack of rainfall may predominate. It is interesting to note that weathered range grass sampled the spring of 1975 still follow historical trends in spite of the unusually high values noted in the fall 1974 sampling.	
		Paragraph 2 on 1-169 again points out how the authors attempt to use the industries as the simple explanation for all problems. The explanation of greater amounts of dust or particulates from FMC and Simplot also lacks validity. Since the blades of grass have a small surface area compared to alfalfa, particulates are going to be a lesser part of the total fluoride concentration in grasses than alfalfa. It seems that the Task Force should limit itself to facts and not indulge in speculation outside their area of "expertise."	
22	1-171-3	The Task Force states that thorium concentrations have been measured in the FMC plant 3.25 times the AEC allowable limit. This information is in error. Again, there is no reference to where the statement came from, but we believe it had its basis in the report entitled, "Pocatello and Vicinity Environmental Air Sampling, December 1969	22. The thorium concentrations are not attributed to the FMC plant in the text. However, the text has been amplified to clear up any ambiguity.

	Page	Paragraph		
22			through May 1970 by the Health Services Laboratory, Idaho Operations Office, U.S. Atomic Energy Commission." In this report the authors alleged that the thorium concentration was from a triple superphosphate operation. FMC does not produce triple super phosphate. The group apparently did measure polonium concentrations 41% of the AEC allowable limits for non-restricted areas. However, in subsequent measurements we have not been able to document these high levels.	
23	1-173		The data in Table 117 should be referenced more precisely.	23. Table 1-17 was compiled from data obtained from the Office of Radiation Programs, Environmental Protection Agency, Las Vegas, Nevada.
24	1-186 thru 189		The method used to prepare the correlation lines shown on these graphs were not documented. However, we believe that least - squares correlations were developed for the equation: log (concentration) = a + b log (distance) since we have been able to duplicate the line using this form. If the data is developed this way then correlation statistics should be presented because the results as shown lead to erroneous conclusions. For instance, we re-correlated the data presented in Figure 119c -- fluorine concentrations in wheatgrass northeast of the Pocatello plants. Based on our analysis, the (F) test was not statistically significant at the 95% confidence level, or to put it simply, a horizontal straight line drawn through the mean of the data would describe the data as well as the EIS line. We suspect the same situation holds for the other graphs presented on these three pages and for the graphs presented on page 1-93.	24. The data were analyzed by least-squares regression as indicated. Table 1-18a has been added to the text; it contains statistical data for all elements for which significant correlations were found.
25	1-280	2	The statement that Caribou County is undergoing "a dynamic pattern of growth" should be documented. The census data for 1970 and 1973 indicates stagnation after 1970.	25. This material was extracted from a report to the Task Force by the Southeast Idaho Council of Governments. The wording has been modified in the text.

	Page	Paragraph	
			The 1974 projected population for the County is not significantly different from the long-term growth pattern. To give proper weight to statements such as "dynamic pattern of growth," the growth rate should be put into perspective by comparing it with national and state rates.
25	1-285	3	Again, the Task Force uses a catch phrase, "a burgeoning population in the northern counties." From their statistics, in the 1970 to 1974 period Bannock County's population increased by only 1% per year. We suspect, compared to the national population increase, this would not be considered a rapid growth rate.
	1-337 and 338	all 1 and 2	This entire introduction should be rewritten to reflect the realities of growth based on a realistic supply-demand projection as outlined in our discussion of pages 1-25 through 1-29. In addition, all of the comments regarding environmental impacts from page 1-337 through 1-419 are based on the erroneous assumed expansion to 15 MM tons by 1980; this entire chapter should be rewritten based on a more reasonable assumption of development rate.
26	1-338	3	Again, the Task Force has not put things in the proper perspective. They talk about somewhere between 6,700 and 7,200 acres, depending upon which page you are looking at, being "destroyed" during phosphate mining. As far as we can tell in the study area, there are about 4 million acres of land. In perspective then, the phosphate industry would only be touching about 0.2% of the land in the area. Of this land, by their own figures, only 40 to 60 acres are farmable and only 200 to 400 cows would be displaced. In the whole scheme of things then, the industry's impact on the land is likely to be very small.
	1-339	all	

26. A discussion of mining at a more probable level of 15 million tons by the year 2000 A.D. has been added to the text.

	Page	Paragraph		
27	1-339	Table	Timing should be corrected to reflect much lower rate of development.	27. See response to comment #26.
28	1-339	3	There are no pits that are likely to be 800 feet deep at current or even foreseeable economics. The deepest pits will probably not exceed 350 feet to 400 feet because stripping ratios become excessive. In addition, technology has not been developed to process the unaltered ores which invariably occur below these depths.	28. One mining plan as submitted for approval calls for mining to a depth of 750 feet.
29	1-339 1-340	5 1	Omit reference to Dry Valley beneficiation plant.	29. See response to comment #8.
30	1-359	3	In conversations with the Department of Health & Welfare, FMC learned that two wells in the old Alameda area of Pocatello, well removed from the phosphate plants but within 25 feet of each other, showed radically different nitrate levels. One showed nitrates over 100 ppm while the other was clean. Batiste Springs is reported as 20-30 ppm nitrate. Another well in the Cherokee Addition south of Pocatello, also well removed from the plants, is reported high in nitrates. The nitrate content of the water from wells in the area near the Pocatello processing plants has not been shown to be high in nitrates. The Task Force should put the "nitrate problem" in perspective - there is no evidence that the "high" nitrate wells are due to the phosphate processing plants.	30. The text has been revised to clarify this point. An alternative natural source of high nitrate in ground water is discussed in the text.
31	1-338 -	2	The Clean Air Act and the Federal Water Pollution Control Act, through the National Pollutant Discharge Elimination System Permits (water) and New Source Performance	31. The Task Force agrees that new beneficiating plants and/or expansion of present processing plants will be controlled by these regulations which govern air and water quality. Other impacts, such as change in land use, vegetation, and aesthetics will occur at such time as building or expansion may occur.

	Page	Paragraph		
31			Standards (air), and State regulations will control plant emissions to the point where neither the air or the water will be seriously impacted. The Task Force has ignored the effect of regulatory changes made over the past 5 years.	
32	1-389	1	The Task Force anticipates in this section, and elsewhere in the report, that perhaps a thousand acres of land would be required to provide housing for the new people in the area. However, elsewhere in the text they also mention that Soda Springs has a thousand acres of vacant land within the corporate city limits. Again, the two facts are not put together to give the reader perspective.	32. The development of housing will be controlled to a considerable degree by land values rather than availability within the Soda Springs corporate limits.
33	1-391 thru 1-393a		The Task Force projects 2,335 basic jobs in the industry and 22,000 new people in the area by 2000 as a result of phosphate mining. Again, they fail to put this in perspective. The total projected growth for the area by 2000 is 179,000 people. Phosphate mining directly contributes about 1% of the people growth in the area.	33. These numbers have been revised in the FES; however, the relative proportional increase is essentially the same as noted.
34	1-365-368		The Task Force has projected a considerable deterioration in ambient air quality due to particulate emissions from the FMC plant. This projection is based on two erroneous assumptions: (1) That the production would increase between now and 2000. FMC does not know whether demand growth will support substantial increased production. We have no plans to expand at present. (2) State and Federal agencies will not enforce existing ambient air standards -- they are. The FMC plant has been on environmental compliance schedules since 1972 nearly continually.	34. The production rate assumed in the DES was supplied to the Task Force by FMC in January, 1975. The good record of FMC in complying with current ambient air standards is acknowledged.

	Page	Paragraph		
35	1-414	3	The Task Force has stated that approximately 25% of the recreational opportunities in the area will be lost due to mining. Since mining will alter only 0.2% of the land in the study area it is not intuitively obvious how this figure was developed. We think the Task Force's basis should be rather carefully documented.	35. The text has been amplified to clarify how the figure was determined.
36	1-418	4	Again, we come across the undocumented statement that "much vegetation" will be destroyed by mining. In view of the amount of land that is being utilized we think this statement should be documented.	36. Based upon the 16 mining plans as submitted, mining and related activities will remove vegetation from 8,900 acres. This is so stated in Part 1, Chapter 3 - Vegetation. The phrase "much vegetation" has been changed to this quantified amount in the final.
37	1-528		The Task Force's recommendation to locate all processing facilities around Soda Springs may have failed to consider the solid waste disposal problem. Any beneficiation plant by definition has solids that must be spoiled. By moving the beneficiation plant away from the mine a very good disposal site -- the mined pits -- is lost. They also have ignored the economics of transporting dilute ores and the problem of handling wet ores in the cold climate. In addition, we fail to see what social and economic advantages exist in locating all the plants on one site. The mines will still be separated and the mines will employ far more people than any beneficiation plants that might be located in the area.	37. This problem is now identified in the text.

APPENDIX III Specific Comments on Volume II, Part 7.

	Page	Paragraph		
38	7-7	3	As stated in more detail in our comments on page 1-6, paragraph 3, this ore does not require beneficiation for use in FMC furnaces; therefore, it is highly unlikely that we would construct a beneficiation plant or tailing pond to process furnace feed.	38. See response to comment #8.
39	7-8	3	Total production by year 2000 is more likely to be on the order of 15-25 MM tons rather than the 38 MM tons indicated since, as stated elsewhere, we do not anticipate extensive mining in Dry Valley before about 1990.	39. An analysis of mining at a more probable level of 15 million tons by the year 2000 A.D. has been added to the text.
40	1-229	-	Sections of the stream are permanent and other sections sink in the valley fill and go dry during the summer.	40. The Task Force is unable to identify this stream. Page 1-229 of the DES is the beginning of a table that lists all significant streams in the region.
41	7-19	5	There is no significant fishery in lower Dry Valley except near the mouth (north of Chicken Creek) where Dry Valley Creek is perennial and enters the Blackfoot River. Most of this section of the Creek is north of the proposed mine.	41. There is only a minor, limited fishery in Dry Valley Creek but we do not agree that there is no significant fishery. Fish from the Blackfoot River do move into lower Dry Valley Creek for spawning and rearing and lower Dry Valley Creek does contain a minor, limited resident fishery.
42	7-16	2	A systematic archeologic survey was completed on the mine site on June 26, 1976 and the archeologist's report was submitted to the U.S. Geological Survey in Pocatello, Idaho, on July 7, 1975. This report accompanied our exploration permit application to the U.S. Geological Survey. Two minor occurrences of possible archeological materials were noted but no archeological site was found. Archeological clearance was recommended.	42. The text has been changed to reflect the archeologic survey.
43	7-17	1	As discussed in detail elswhere, FMC will not beneficiate furnace feed; omit the reference to the beneficiation plant.	43. See response to comment #8.

	Page	Paragraph	
44	7-18	1	"Possible failure of inadequately designed water control structures would contribute to sediment loads." We do not intend to inadequately design these structures ... they do not constitute difficult engineering problems. This also applies to design of the proposed waste pile mentioned.
45	7-18	4	What is the basis for the estimate that sediment loads to lower Dry Valley Creek will increase 5-9 times over present conditions? FMC feels that statements like this should be carefully documented so that responsible parties can review their basis. This statement seems to be in error in light of the recently promulgated U.S. Environmental Protection Agency National Pollutant Discharge Elimination System (NPDES) Guideline for Phosphate Mining.
46	7-20	1	740 acres of range land supporting 400 AUM's annually will be eliminated during the life of the mine. This paragraph states that the value to the Federal Government in grazing fees is $2,360 annually. Over the assumed mine life of 22 years (see Part I, page 1-4, Table 1-1) this equates to a total grazing fee loss of $51,920, or about $70 per acre. This statement has no economic meaning unless it is compared with the Federal income to be gained due to conversion of land use from grazing to mining. Using the same assumptions shown in Table 1-1 of Part I, total production of phosphate rock over the 22-year period will be 44 million tons. The newly established (June 1976) Federal royalty base for 25% P_2O_5 furnace-grade phosphate rock yields an effective royalty of about $0.35/ton. Assuming this royalty will remain constant over the mine life, production will generate $15.4 million in royalties; 37.5% of these royalties will be returned

44. There are risks involved in both the water-control structures and the proposed waste piles. Hydrologic data are inadequate to use as a basis of design. For example, maximum rates and volumes of runoff which will be experienced on the average once in 100 years at the mining site are not well known. Therefore, failures of some water-control structures or excessive sediment movement from waste piles are possible. These risks must be recognized.

45. The areas and types of disturbances were located on 7½ minute topographic maps as accurately as possible from the information available. The sediment yield for each watershed (in this case, lower Dry Valley Creek) was estimated for an average climatic condition both with and without the proposed mine. The progression of mining was evaluated by reassessing the conditions for each year of the project. An evolution of conditions from existing to disturbed to reclaimed was assumed based upon an evaluation of abandoned, discontinued, and operating mines in the area. A lack of detail in many mining plans, the uncertainties of all erosion-sediment models, and the variations of weather contribute to the uncertainties of these sediment estimates. As better data become available, these estimates should be improved. All of the data used to derive these sediment estimates are on file at the Caribou National Forest Supervisor's office.

The estimates are based on an evaluation of the plan that was submitted. New regulations may require that plans be changed, but until the revisions are submitted, the existing evaluation of likely impacts is valid.

46. We agree that mining will provide a greater return per acre than grazing to the Federal government through the year 2000. Economic analyses similar to yours are being made and will be considered.

	Page	Paragraph		
46			to Idaho under existing regulations; therefore the net income to the Federal government from phosphate royalties will be $9.625 million, or $13,007 per acre, 186 times the loss from grazing fees. In addition, both the Federal, State and local governments will realize considerable tax revenue on mining and manufacturing incomes.	47. The text has been changed to reflect this.
47	7-21	1	An archeological survey has been made (see discussion of page 7-16, paragraph 2). No adverse impact was indicated.	48. Burial of more than a mile of stream channel, even though directed through permanent drainage structures, results in loss of more than a mile of open-flowing streams with fish and wildlife habitat, watering holes, and several riparian features of considerable value. Potential exists for plugging and overflowing, erosion at the lower end, and possible maintenance needs at some future time.
48	7-24	1	"More than a mile of stream channel will be permanently buried." Statement fails to recognize that the entire buried portion will be directed through permanent drainage structures.	
49	7-24	4	Forage production of 400 to 1,000 pounds per acre on 728 acres of reclaimed land is substantially more than half of the present value (1,000 pounds per acre on 740 acres - see page 7-20, paragraph 1).	49. The range of 400 to 1000 pounds includes the 500 pound value used as an estimate of production following reclamation.
50	7-25	-	This figure is in error according to our schedule.	50. Graphs at a more probable level of mining at a total of 15 million tons by the year 2000 A.D. have been added to all proposed sites.
51	7-26	3	An archeological survey has been completed.	51. The text has been revised to reflect this.
52	7-27	1	The startup date and total tons mined by 2000 are wrong (see discussion of Part I, page 1-25, through 1-29).	52. A discussion of mining at a more probable level of 15 million tons total production by the year 2000 A.D. has been added to the text.
53	7-27	3	Forage production stated here is different from that shown on pages 7-20, 7-24, 7-25, 7-27 (paragraph 4), and 7-28 (paragraph 1) ... which is right and why the repetition?	53. Present production is approximately 1000 pounds per acre air dry weight. It is expected that post-reclamation yield production will not exceed 500 pounds per acre air dry weight. The text has been corrected accordingly.

	Page	Paragraph	
54	7-28	1	Omit two references to beneficiation plant.
	7-29	1	Omit reference to beneficiation plant.
	7-29	2	Estimates are wrong because mine startup date assumption is wrong.
	7-29	3	Omit discussion of beneficiation plant requirements.
55	7-31	1	Continued acquisition of ore from other companies after depletion of the Gay Mine is not a viable alternative. If FMC does not mine at Dry Valley or on another nearby FMC unit after the Gay Mine is mined out, our source of ore will disappear and the Pocatello plant will have to shut down.

54. See response to comments numbers 3 and 8.

55. The Task Force believes that acquisition of ore by direct purchase or by acquisition of other leases is viable.

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September 24, 1976

Director
U. S. Geological Survey
760 National Center
Reston, Virginia 22092

Dear Dr. McKelvey:

Please note that there is an error in the letter sent to you on September 23, 1976, covering my comments on the Draft Environmental Impact Statement.

On page 2 of this letter in the annual mining rate table, the total 26 year period should read as follows; 176, 206 and 238.

Also there is an error in Section B page 1 in the comment for page 9-1. The word consequently should be changed to consecutively.

Most sincerely,

George L. Atwood
Manager, Mineral Activities

GLA:kmh

a unit of Monsanto Company

Monsanto

MONSANTO INDUSTRIAL CHEMICALS CO.
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
Phone: (314) 694-1000

September 23, 1976

Director
U. S. Geological Survey
760 National Center
Reston, Virginia 22092

Dear Dr. McKelvey:

The following comments relative to the Draft Environmental Impact Statement, "Development of Phosphate Resources in Southeastern Idaho" are submitted on behalf of Monsanto Industrial Chemicals Company. Please place these comments in the official record.

24R These comments are intended to supplement and amplify our comments at the several public hearings recently held in Idaho. They are intended to be constructive and will, we hope, assist you in developing a more accurate and objective final statement.

The Task Force is to be commended for assembling and organizing the vast quantity of data contained in the E.I.S. It is not surprising that a number of inconsistencies and errors resulted which need resolving.

We have four main concerns with the Draft E.I.S.

1. The assumed annual mining rate is projected at an unrealistic rate which is independent of demand. Without a market, mining will not take place, therefore, demand is the limiting factor on mining rate. All knowledgeable projections show the expected long range western rock demand growth to fall between 1% and 3% with 3% considered very optimistic. The following table, using as a base a 6 million ton western rock production in 1974, shows the annual western mining rate developed for three compounded annual rates of increase. Figures represent millions of tons.

Annual Mining Rate

(Projected From 1974 at 6.0 Million Tons at Compounded Growth Rates -- In Millions of Tons)

Year	1%	2%	3%
1974	6.0	6.0	6.0
1980	6.4	6.8	7.2
1985	6.7	7.5	8.3
1990	7.0	8.2	9.6
1995	7.4	9.1	11.2
2000	7.8	10.0	12.9
Total 26 Year Period	17.9	20.6	23.8

1 These numbers vary dramatically from the base numbers for the E.I.S. It is essential that the production base be corrected since it is the foundation for the entire E.I.S. and for all predicted impacts. The impacts should be revised correspondingly.

2. The wildlife portions of each section present obvious inconsistencies and are presented without substantiation. An E.I.S. which will be used as a basis for far reaching administrative decisions is not the place for unsubstantiated exaggerations as many of the wildlife statements appear to be. The use of numbers relating to all time high game populations or populations an agency would like to see, rather than actual situations, should be avoided. Claims are made for complete distruction of game populations in instances where only a portion of the habitat would be affected. Migration route interference is incorrectly portrayed. There are strong inferences that wildlife which may not even exist in the area will be affected by mining operations. In total, the wildlife sections are not credible and lead to doubt as to the reliability of the E.I.S.

3. The objectivity of the E.I.S. should be maintained with the injection of a minimum of personal opinions. Let the facts speak for themselves but make sure it is fact and not opinion.

1. The EIS now includes an analysis at a lesser, more probable rate.

2. Population estimates are based on potential carrying capacity of key ranges and do not constitute the highest population levels of past years. In many instances, population levels can be increased barring undue adverse effects upon habitat, migration routes and other key areas. Displacement of species from one minesite to another or adjoining areas is feasible.

3. Every effort has been made to maintain objectivity. In some cases, professional judgment has been necessary; this should not be construed as personal opinion.

4. The E.I.S. should be completed on its original schedule at all costs. The industry has been kept off balance by the moratorium on new activity and by the uncertanties created by a lack of knowledge of when approvals can be expected. Damage from additional delay can be substantial and could jeopardize substantial sections of the industry.

Three sections of specific comments follow.

A. Comments on Volume I with page references excluding air and water. (14 pages)

B. Comments on site specific Monsanto Mine plans found in Part 9 of Volume II. (17 pages)

C. Comments concerning air and water. (6 pages)

Most sincerely,

George L. Atwood
Manager, Mineral Activities

GLA:kmh

Enc.

4. Full effort of the Task Force was devoted to the completion of the EIS.

SECTION A

COMMENTS ON VOLUME I WITH PAGE REFERENCES EXCLUDING AIR AND WATER

PAGE		
P-1	5	Only 50% of 15,761 acres of leased acreage will be disturbed.
P-2	6	Inactive plant not likely to be reactivated because of state laws.
P-3	7	Infers approval of all pending actions - not likely.
P-3	8	Infers that most deposits will be mined out by 2000 A.D. Submitted plans cover only a portion of the reserve.
1-3	9	Actions will be distributed sequentially over a period of 40 plus years in Monsanto's case.
1-3	10	Clarify sequentially since most people read this as happening simultaneously.
1-3	11	Assumed ore production of 15 to 20 million tons by 1990 should be changed to read 12 million tons by 2000.
1-3	12	Clarify and stress that development of the 16 mine plans would be on only 36% of the land currently under lease and that all phosphate deposits are not under lease. Also clarify and stress that only 50-60% of the leased area developed will actually be disturbed.
1-4	13	Table 1-1 should be modified to reflect Monsanto's corrected 1 MM ton per year annual production rate already reported to you in our letter dated June 7, 1976 (Attachment 1). Also reduce Henry reserves to 8 million tons.
1-7	14	Doubt that FMC will require washing plant as feed to electric furnaces need not be washed.
1-8	15	Change Monsanto plant facilities to reflect little or no expansion through 2000 A.D.
1-10	16	Table 1-2 - Insure that this table reflects no planned expansion for Monsanto. The present plant site is sufficient for our needs. Change capacity to 1.0 MMTY.
1-11	17	Change footnote 13 to reflect no expansion.
1-13	18	Should note that in practice the leases are issued only in 40 acre blocks requiring the lessee in many instances to lease 40 acres where the phosphate may only occupy an acre or two. This fact exaggerates the expected area of disturbance and exaggerates the overall lease figures.

5. This is so stated under Chapter III, Part 1.

6. Reference to reactivating a plant have been deleted.

7. No inference is intended; each action will require separate consideration.

8. No inference is intended; reserves are sufficient to last well past 2000 A.D.

9. Text now includes discussion of lower rate of production.

10. Sequential operations are shown in Tables 1-1 and 1-1-a.

11. Mining operations at a lesser rate have been added.

12. These data are so stated in the manuscript.

13. Table 1-1-a has been added.

14. FMC, in proposing calcining, was considering using the product for fertilizer production at the time.

15. The text has been amended.

16. The text has been amended.

17. The text has been amended.

18. This has been added to the manuscript.

PAGE		
1-22a 19	Text should emphasize that historically only 21% of prospecting permit application acreages have gone to permit and only 3% have gone to preference right leases. Of all permits applied for through 1970 (action completed) only 6% of acreage was issued as preference right leases. If this ratio holds on the 121 M acres pending, only 7 M acres will be issued as preference right leases.	19. This is discussed in detail in Part 2. See page 2-11 of the Draft EIS.
1-23 20	Haul distance from Henry Mine to Monsanto plant is 16.5 miles.	20. Manuscript has been changed accordingly.
1-26, 27, 28 21	Change text and tables to reflect changes in supply forecast by producers and keep in mind that the western phosphate will not be produced unless it can be sold. The production surplus shown here has distorted the whole basis for the E.I.S. It is unlikely that export demand for western rock, other than to western Canada, could be significant in view of Africa's rock availability. The 1% demand increase for western rock may be quite accurate.	21. The text represents the Bureau of Mines forecasts.
1-104 22	Include cultivated, overgrazed areas in third line from top as they represent the largest and most vulnerable areas for high volumes of sediment and runoff. Don't be so biased.	22. Cultivated and overgrazed areas have been added to the listing.
1-197 23	Strongly suggest that deer and elk populations and discussions of same not be lumped for the four management units. Unit 76 covers most of the current and potential phosphate activity and should be addressed separately. Grouping it with units 66, 66A, and 69 exaggerates overall populations affected by proposed phosphate mining activity and leads to restrictive conclusions.	23. All data available within the stated study area were included. Inasmuch as Unit 76 is within the study are, it was included.
1-197 24	Where does the Idaho F&G propose to acquire the "additional critical winter range"? Is this to be located on known phosphate deposits? Identify this.	24. Possibility of acquiring private lands adjoining critical winter range would be considered.
1-198 25	The term "preferred critical elk wintering areas" is contradictory. Either it is critical or it is not. Preferred indicates a choice which means it is not critical. The word critical is overworked and improperly used in this concept.	25. The word "preferred" has been deleted.
1-198 26	Critical winter range is here identified as snow free south and west exposures which we know to be correct. Elsewhere it is stated that specific proposed mining plans will eliminate such critical range although they are on the deep snow - north and east exposures a significant distance from this habitat situation. This erroneous conclusion will lead to detrimental decisions regarding specific mine plan approvals. Correct it.	26. Not all critical winter ranges are snow free. Elk and moose will winter in areas of higher snow depths than deer, but are limited in their movement by snow conditions. Most such wintering areas are critical.
1-198 27	The critical elk wintering range as shown on map 8 is not definitive according to this page. How then can it later be stated that mining will destroy a specific winter range and force relocation of a specific number of animals. It is either definitive or it isn't. You can't have it both ways.	27. In order to be unusable a range does not necessarily have to be destroyed. Operations adjoining such ranges can effectively disperse animals to the point of non use.

PAGE

I-198 28 The only value of listing the wintering areas for units 66, 66A and 69 is to show the abundance of winter area in those units. They are out of the area proposed for phosphate activity. With this much winter area available it is incorrect to term it "critical". As it is used in the draft, the word critical would still be applied if elk could and were using every square foot of S.E. Idaho as a wintering area because it would still limit the population. This is a good example of crying wolf.

1-200 29 If two deer hunts were necessary to reduce the deer herd to its present level, why is it now considered desirable and necessary to increase the herd to its pre-1964 levels? Is it possible that this is just a stratagem to make anti mining decisions more probable? In the attached June 7, 1976 letter (Attachment 1) from Idaho Fish and Game Department this would mean increasing Unit 76 deer population from 6,500 (1975 figure) to about 13,000 (1963 figure).

1-200 30 The deer population of Unit 76 should be addressed separately since that is where the mining actions are proposed.

1-201 31 This table without data from 1963 on does not provide support for the text. Unit 76 should be emphasized.

1-202 32 Reference to low deer populations in adjoining states sounds like an excuse and is not germane to the E.I.S.

1-202 33 Critical winter range is rightly described as on southerly exposures with reduced snow depths. In the site specific analyses the proposed mining activity on the north and east deep snow area is predicted to destroy critical winter deer range. These statements are in direct conflict. It is obvious that winter range would not be disturbed much less destroyed under those circumstances.

1-202 34 Winter deer range is described as being less than 50% of the summer range. Since the whole area is summer range, this would not seem to limit winter range very much. Has the word critical been over used?

1-203 35 In table 1-21 under Unit 76 none of Monsanto's proposed mining areas are listed (W. Henry Whitelocks refers to the willow flat near the reservoir, not to the Henry Mine area) yet in the site specific write-ups each of Monsanto's proposed mining area is described as disturbing or destroying critical winter range. Obviously then the proposed mine areas were not recognized as being important "critical" wintering areas and they should not be so inferred in the site specific write-ups. They should not now be added to the list of important areas as this would confirm bias against mining.

28. Units 66, 66A, and 69 are included in the study area as designated on the appropriate map within the impact statement. The Task Force delineated this boundary because the phosphoria formation extends into this area and is potential for future mining activity. The wintering areas are critical due to big game being forced to concentrate on the areas during periods of deep snow and severe weather. The size of key wintering areas are one of the principle limiting factors for deer and elk populations.

29. Two-deer hunts were initiated to provide hunters with an opportunity to harvest some additional deer that were available in these herds. Population levels remained high throughout a 14-year period of two-deer hunts until the severe winters of 1970 and 1971 when extensive winter kills occurred. Even with high harvest levels, it was mortality resulting from two severe winters consecutively that caused major declines in the deer population. Based on the fact that populations of about 13,000 deer were sustained during the years prior to winter die-off in 1970, it is assumed that this level can again be attained, withstanding abnormally severe winters.

30. Mining impacts as they occur in Unit 76 are addressed in this statement.

31. The table was not intended to portray all available data. Information in the table shows comparative data for recent years that are applicable in evaluating present and potential population levels.

32. The fact that deer populations in adjacent western states have also experienced declines is relevant due to parallel conditions in Idaho.

33. Critical winter range includes total area utilized during the winter stress period. Big game species utilize north and east slopes as changes in snow depths occur even though south slopes receive the greatest impact. The ability of big game to use north and east slopes during some periods of the winter also reduces the total impact on south slopes. The close proximity of mining on ridges will drastically affect use by big game on adjacent south slopes.

34. The size of winter range is determined by snow depth and topography and is clearly defined.

35. In table 1-21, W. Henry (Whitlocks) was not intended to refer to the Henry minesite. The Henry mine area does include another big game winter range. The effect of each proposed mining plan on winter range is evaluated in Parts 4-11.

PAGE		
1-204	36 Deer migration routes are described as being well developed and are shown on map 7. In the site specific write-ups comments as to mining development blocking migration routes are not consistent with these "well developed" migration routes mapped.	36. Map 8 contained errors that occured in reproducing the original. The map has been corrected.
1-206	37 This describes the preferred sage grouse habitat as being sage brush grass vegetative type in association with stream bottoms. This is fortunate as it does not conflict with our proposed mining areas which are located on ridges well away from bottoms. The site specific comments are in conflict with this described preferred habitat.	37. Sage grouse summer habitat is located at lower elevations, however, during the winter, ridges and higher open slopes become preferred areas where there is available food and less snow.
1-215	38 The statement that "Available data suggest that usage of the nesting geese are moving from Blackfoot Reservoir to the Blackfoot River and other tributaries", is not substantiated by the table on 1-213 where no data is given except for 1974 for Blackfoot River and tributaries.	38. Censuses of goose breeding populations in the upper Blackfoot River area were not made prior to 1974. At this time more effort was made to obtain a more complete inventory of production areas and the upper Blackfoot River was one among several areas surveyed.
1-216	39 Trumpeter swans are not shown to nest on Woodall Marsh. In the site specific write-up on page 9-94 infers frequent presence and future nesting in that area. This is stretching the point to infer potential mining damage.	39. Woodall Marsh is potential good habitat for future expansion of this species.
1-218, 219	40 This statement is very vague on both numbers and location of the bald eagles in this area. The statements "... it is estimated that there are approximately...", "... it is estimated to be approximately ...", and "... thought to be ..." are vague in the extreme. It infers that mining activity will damage a bird population that is not proven there.	40. The presence of bald eagles is well documented. Exact numbers, however, are unknown due to limitations in manpower and funding. Estimates are based on the best information available.
1-220	41 It should be noted that the 4,000 bird migratory population is in the area for only a short time and does not limit its range to the nesting area. It is found in large numbers in harvested grain fields.	41. The duration of stay may be short, but it is a vital link in the migration pattern.
1-222	42 The preamble to the table would infer that the whole study area is crawling with endangered or threatened species. Several of those listed are not even known to exist in the area today.	42. Professional sources indicate sightings and indications of the species as listed. Due to the extreme scarcity of some species, they are not readily observed.
1-224	43 The whooping crane an endangered species is here shown to have been introduced to the area and is supposed to use all of the sand hill crane breeding ground. It is incorrect to say that the suitable habitat is confined to Grey's Lake, Diamond Creek, Lanes Creek, Dry Valley and Slug Creek since sand hill cranes nest all over the South East Idaho Area. Certainly man cannot be expected to vacate S.E. Idaho. This section should be put into perspective.	43. The whooping crane is dangerously close to extinction. The success of the transplant experiment will depend upon preserving the required habitat. Such habitat exists at Grays Lake, Lanes Creek, and other areas specified. Attempts are being made at this time to delineate critical habitat under the Endangered Species Act.

PAGE		
1-227	It should be noted that the Little Blackfoot River is a good fishery only at its mouth - where it empties into the Blackfoot Reservoir. Migration upstream is largely blocked by spring formations (travertine) created falls, and by CO_2 charged springs. This stream does not flow in some sections during dry years. (Page 1-99). Although this stream has been stocked occasionally in the past near its mouth stocking has been discontinued. There is no carryover fishery. In any event, that portion of the stream running near the proposed Henry Mine is not recognized as a fishery contrary to the statement on 1-227.	44. The statement on carryover fisheries has been deleted. Although this is a small carryover, it is insignificant.
1-264	Monsanto plant produces about 200 million pounds. The older kiln has been dismantled.	45. The text has been changed accordingly.
1-265	Monsanto uses about 1.0 million tons of phosphate rock. Do not use the term shale as we use the high grade bed as well. The quartzite deposit contains millions of tons not billions. The trucks are triple trailer units, each trailer carrying 70 tons of ore. The trommel eliminates limestone. The elemental phosphorus is shipped to phosphorus burning plants in Long Beach, St. Louis, and in Trenton, Michigan.	46. The text has been changed accordingly.
1-269	Uranium does not report to the elemental phosphorus.	47. The text has been changed accordingly.
1-270 to 278	The introductory paragraph to I. Controls and Restraints must have been written with tongue in cheek when you consider the 8 pages of land use controls which follow. How many layers of bureaucratic control are necessary?	48. The text is a factual statement of the existing situation.
1-278 to 299	Socioeconomic Development. This entire section is based on the unrealistically high annual phosphate mining rates and must be adjusted to reflect the lower impacts.	49. The text has been modified accordingly.
1-287, 290	An attitude survey which is not necessarily representative and which is not reported by community is more misleading than helpful and should be eliminated.	50. The Task Force feels that this discussion is appropriate.
1-295, 296	Intergovernmental cooperation is assumed to be highly desirable and is measured by an arbitary political vitality index. Governmental independence may be more desirable in its ability to react quickly to the situations posed by phosphate development. This section is an unproven and academic theory and has no place in an objective report.	51. Intergovernmental coordination is deemed necessary to prevent duplication of efforts and to solve problems with overlapping jurisdictions.
1-337, 338, 339	All numbers on these pages should be revised to the lower realistic numbers you now have developed. It is suggested that you stress the long mining future for the area with the reserves known to alay fears that after the year 2000 no phosphate will be left and that the area would become in effect a ghost town.	52. The text has been modified accordingly.

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1-340, 341 53 Back filling will cause ore losses where soft altered ore extends below the pit. Back filling pits where the alteration limit has been reached will not preclude mining the competent unaltered rock by underground methods at some future date. Underground mining will of course, recover significantly less of the phosphate both because (1) only the highest grade beds could be mined with a resulting loss of at least 70% of the resources and (2) only about 50% of the beds actually mined could be recovered under present safety requirements.. The overall recovery by underground methods then would only be about 15% of the resource as compared to plus 90% by surface methods. It is unlikely that once the high grade beds have been mined by underground methods, the lower grade beds could later be mined because of ground stability problems. Surface mining where feasible obviously conserves the resource since recoveries are so much higher than underground mining.

1-341 54 The 9,700 acres of mixed soil types should be tied to a time period and revised according to your new data.

1-343, 55 Adjust the numbers in the last paragraph to reflect current information.

1-346, 56 Consumptive water use should be revised from the 74,000 acre-feet figure to reflect current data.

1-347 57 For the most part mining operations including exploration drilling are on ridges above water tables and so would not affect the regional water situation as strongly inferred on this page.

1-357 to 361 58 It should be pointed out in this section that the Blackfoot River drains most of the phosphate area with vast natural exposures of the phosphoria. It has carried billions of tons of phosphoria formations during the natural erosion of the region to its present topography. This will better put into perspective the likely effect of mining disturbance on water quality.

1-373 59 Why are management areas 66, 66A, 69 and 78 included as major impact areas? Only unit 76 will be significantly affected by the proposed operations or most other possible operations. The inclusion of these units simply because they are in the study area exaggerates the situation.

1-374 60 The 20,000 acre essential elk habitat should be documented as should the 7,500 acres expected to be altered by mining. Industry must document its statements. Why should statements of this nature be permitted to stand unsupported?

1-375 61 Page 1-374 says 38% (7,500 acres ÷ 20,000 acres) of essential elk habitat will be altered. In line 1 of 1-375 the 38% somehow becomes a 50% loss of the herd. In addition, the supposition seems to be that alteration eliminates all the

53. The text has been amplified to provide a more detailed discussion of backfilling.

54. The time frame of soil disturbance is shown in figures 1-37 and 1-37a.

55. This has been done in the FES.

56. The text has been modified to indicate that improved conservation measures could reduce this total.

57. The text so states that the effect of developmental drilling will be local; that lowered water levels could affect nearby wells, springs, and streams, and that loss of recharge would be mostly of local significance.

58. We have recognized that natural processes are at work in transporting solutes and particulate materials from the phosphoria deposits. However, the rates of such mechanisms will be greatly accelerated by the mining operations, which produce more easily transportable sediments and increase the surface area of fresh weatherable material. Despite these factors, however, we have tried to maintain proper perspective by indicating that natural factors will mitigate many of the impacts.

59. Management Units 66, 66A, 69 and 78 are included as major impact areas because they could be leased for phosphate mining in the future. Also, these areas will be impacted in the future even if they are not mined for phosphate by the increase in people resulting from the expansion of the phosphate industry.

60. The associated mining activities (roads, railroads, noise resulting from heavy equipment, etc.) plus the actual habitat loss resulting from mining will result in approximately 7,500 acres of the 20,000 acres essential to elk becoming unsuitable for elk. Certainly many of the habitat areas relative to vegetative composition will remain suitable for elk, but the human activity, noise, etc. will exceed the behavioral tolerances of elk and these will be unsuitable.

61. The estimated 38% elk habitat having an estimated 50% overall reduction to the elk herd is believed to be very conservative. The Idaho Fish and Game Department has determined the elk in Unit 76 are at carrying capacity now. Forcing 38% of the elk herd onto the remaining elk habitat will result in overgrazing of these habitats below their carrying capacity. Therefore, if the elk herd is not reduced adequately, once the expansion of the phosphate mining commences, a maximum reduction of 76% of the elk herd could result.

PAGE		
1-375 Cont.	elk using the area. This is not likely. In several instances on the site specific write-ups elk winter areas are claimed to be disturbed when in fact no mining actively will take place there. The elk habitat statements appear to be inconsistent and misleading at best and not documented. Incidentally, in Attachment 1 the elk population of unit 76 is stated to be 600 in 1975 not 750 as mentioned on this page of the E.I.S. Of these 118 were harvested in 1975.	
1-375	Unit 76 preseason deer population was 6,500 according to Attachment 1. Unit 76 is the only one significantly affected by the proposed action. It should be discussed separately or instead of the study wide 16,000 deer population.	
62	In its discussion of losses to mining the D.E.I.S. states that 3,000 deer will be lost to impacts on "critical" winter range and that the estimated annual harvest loss will be 1,531 deer. In Attachment 1, the Idaho F&G only claims a population of 6,500 deer for unit 76 with a 1975 harvest of 1,560 animals. Since only the winter range on unit 76 is impacted by proposed mining action, then it follows that 46% (3000 ÷ 6,500 deer) of unit 76 winter range is expected to be totally destroyed and that only 29 animals could be harvested if mining occurs. This is obviously ridiculous. In the site specific write-ups discussed later several winter range areas are presumed destroyed which will not be even touched by the mining operations. It would appear that assumptions based on loss of winter range are inconsistent and misleading. This area may influence discussions on mining acceptability and is therefore much too important to play games with.	62. The discussion in the DES was based upon figures supplied earlier to the Task Force. Based upon these new figures, the paragraph on deer and elk numbers has been deleted.
1-376	Are the losses to the various types of sage grouse habitats actual losses or is it assumed that general activity would have this effect? The first line says "... impacted by loss..." which infers destruction while the last portion of the paragraph indicates that what is really meant is loss of isolation. This should be clarified.	63. Mining or associated mining activities (roads, railroads, mine dumps, etc.) will result in the loss of seven known sagegrouse critical winter ranges, three known historic strutting grounds, ten known critical brood rearing areas and four known nesting areas. Human disturbance, road kills and increased poaching will be major factors adversely affecting sagegrouse populations over those habitat areas lost; the degree of which could not be projected.
63	The second paragraph also has trouble with altered (not destroyed) habitat and assumed grouse numbers (300) suddenly turning into hard numbers stated as absolute loss (300 adults and 660 offspring). This same thing occurs elsewhere in wild life sections of the E.I.S.	The number on page 1-376 are estimates, and are so stated.
	In the paragraph on sharptail grouse it is stated that various habitat impacts will be significant and that populations within the study area could become endangered. This is purely hypothetical since elsewhere (1-208) the only two sharptail habitats in the study area are identified as Bone and Corral Creek areas which are not affected by the proposed activity.	There are known small isolated populations of sharptail grouse within the phosphate mining area; information on their habitat, however, is limited. Two habitats in the Bone and Corral Creek areas have been identified, but other are known to exist.

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1-376, 377, 64: The 1.9 forest grouse population estimate per acre should be documented as most hunters would strongly argue that these grouse are not that plentiful. In this paragraph too altered does not necessarily mean lost.

64. The figure of 1.9 forest grouse per acre was taken from a study adjacent to the phosphate mining area in similar habitation in Utah. These are the only data available on forest grouse populations and density, and therefore were used in estimating populations.

Inasmuch as precise populations of ruffed and blue grouse are unknown, losses were estimated on the basis of altered habitat, as stated in the EIS.

1-380, 65: Why claim damage to a bald eagle aerie which is not occupied? The sand hill crane has demonstrated a marked ability to co-exist with human activity as is shown in the entire study area and particularly around farming activities where they have become a pest. It is incorrect to say that this bird will become threatened or endangered by human activity. Let's be objective.

65. Bald eagles are known to occupy the Middle Sulphur Canyon area as a wintering aerie. The phrase "not now occupied" was inadvertently used in early manuscript written during the spring and summer.

Nesting populations of the overall sandhill population in southeastern Idaho could be reduced to the degree they become endangered under the Endangered Species Act of 1973.

1-381, 66: The migration route for peregrine falcons is north of the mining activity area and is unlikely to be disturbed by the proposed mining. The peregrine falcon is stated to be most sensitive to human activity in late winter and early spring,a time when mining activity is nearly zero due to spring thaw. It is therefore unlikely that nesting site abandonment would occur.

66. The migration route for peregrine falcons to our knowledge, is unknown and not necessarily north of the mining area. One peregrine falcon was sighted in the fall of 1975 (believed to be migrating) one mile north of the U.S. Forest Service boundary on Diamond Creek.

The time of courtship and nesting of peregrine falcons is laregely determined by weather conditions and some years peregrines will nest in the late spring and early summer. Should this occur once during the period of mining activities, peregrine falcon nest abandonment could occur.

1-381, 382, 67: The bottom paragraph basically says that all suitable whooping crane habitat outside Grey's Lake Refuge will be destroyed by mining. This is potently absurd since sand hill crane habitat is suitable for whooping cranes and that exists practically everywhere in the study area. It is recognized in the E.I.S. that mining will affect only a small percentage of the study area so only a small area suitable for whooping crane habitat could be affected. We fail to see how the whooping crane can expand enough to need these mining areas without becoming so plentiful that they would no longer be an endangered or even a threatened species. It appears that the artificial introduction of this bird will have so much affect on the amount of the study area because of the Endangered Species Act, that it is a major federal action. Should the whooping crane project be stopped until a full scale regional E.I.S. is completed on its effect? Perhaps a court action should halt the reintroduction project until N.E.P.A. is complied with.

67. Whooping cranes are much more intolerant to human disturbance than sandhill cranes. Since whooping cranes generally will occupy habitats similar to sandhill cranes, any areas occupied by sandhills could be occupied by whooping cranes in the future. An environmental assessment was prepared on the whooping crane research project and it was determined the project did not constitute a major federal action. A designation of critical habitat for the whooping crane has not been made at this time.

1-383, 68: The statement that "Since the operations have ceased, trout populations have become re-established" is interesting since it contradicts direct and implied statements elsewhere in the E.I.S. The unfortunate treatment of Georgetown Creek was much more harsh than could result from a mining operation since a large elemental phosphorus and fertilizer complex drained directly into that small stream.

68. Trout populations have increased in Georgetown Creek since mining operations terminated. Studies of past stream alterations such as occurred at Georgetown Creek indicated fish populations in the altered sections will be depressed seven to eight times the original numbers over a period of up to 100 years.

1-384a, 69: The statement that the Little Blackfoot River is stocked with rainbow trout is in contradiction with the last paragraph on page 9-13. The stream is not now stocked. When it was stocked it was only near the mouth several miles from the Henry mining area.

69. At one time the Idaho Fish and Game Department stocked the Little Blackfoot River near its mouth at the Blackfoot Reservoir. Due to low returns of the stocked fish this practice was discontinued. The text has been changed to reflect this more clearly.

PAGE

1-384a Cont. 70 Sediment control measures in the Henry plan will prevent sedimentation in the Little Blackfoot River. It should be noted that the word river is a misnomer since a person can jump across the stream when it does flow.

1-385 71 Trail Creek and Caldwell Canyon properties may well be serviced by a heavy duty haul road rather than a railroad.

1-386 to 390 72 Conform land use numbers to new data.

1-390 73 The concern of stockmen over accidents or death losses while natural, is not backed up by Monsanto's 25 year experience of zero incidents of this type.

1-391 to 409 74 Conform socioeconomic development numbers to new data.

1-408 75 Royalty is currently about 40 cents per ton and the new law changes return 50% to the states. Ten percent of that returns to the county of origin under a law passed in the last state legislative.

1-411 76 Monsanto now plans no significant expansions so the 720 megawatt electrical load should be revised downward.

1-420 to 430 77 This amazing 11 page list of layer upon layer of governmental control over mining does not have room for independent action by the operator. With this absolute control by big brother why is there so much concern over the proposed mining activity? It would appear that for each miner there would be about 10 governmental people looking over his shoulder with authority to control his actions.

1-441 78 The suggested government or company subsidized mass transportation system is not needed by the anticipated revised annual production levels. Most of the people needed are already employed in the industry and already have homes in the area.

1-451 79 No need for mass transit system. Beneficiation facilities at all mining sites are not necessary or desirable. Elemental phosphorus plants do not need beneficiated rock. Placing beneficiation plants in such areas as Dry Valley, Slug Creek and Wooly Valley would have much higher impacts on wild life, aesthetics, water quality and transportation systems than centralized sites. The suggestion for year round ore haul shows a lack of understanding of the harsh winters and the physical nature of the ore. Don't consider it.

70. The Task Force believes some sediment is likely.

71. The EIS does not state that rail will be used.

72. The text has been amplified accordingly.

73. The record at Monsanto has been incorporated into the text. However, it should be noted that only stray cattle or sheep have grazed the area, which is fenced.

74. The text has been modified accordingly.

75. The text has been modified accordingly.

76. The text has been modified accordingly.

77. The Task Force is not able to verify the ratio stated.

78. The text has been amplified to express this point.

79. The statement has been modified to reflect the infeasibility of this proposal.

PAGE		
1-453, 454	80	The proposed layer upon layer of study proposed by the State Historic Preservation Officer is a classic case of narrow mindedness. The system proposed is not needed or desirable because of the unlimited delays it will insure. Any system for archeological or historic inventory must be practical or workable in order to function. This proposal should be reworked for reasonableness.
1-457	81	Conform Chapter V to new production level data.
1-458	82	The statement "The effects on wild life will be compounded rather than proportional to land disturbance, etc." is self contradictory. But if taken at what it is apparently trying to say would indicate that the much lower rate of annual production would result in a compounded smaller rate of affect on wild life. The statement probably could be clarified by reading "Wild life loss is proportional to loss of critical range."
1-461	83	"Potential for unavoidable impacts appear high for ... Trail Creek, Slug Creek ...". This statement does not appear to be substantiated by other sections of the E.I.S. Suggest reclassifying those two streams to moderate.
1-468	84	The estimated losses to deer, elk, and sage grouse do not correspond with those shown on page 1-375 nor do the acreages correspond with other sections of the E.I.S. We have addressed the inaccuracy of the basic numbers and the need to reduce the impacts in relation to predicted phosphate production rates. The same comments apply here.
1-469	85	The Soda Springs to Blackfoot River Road area has been disrupted for many years by Monsanto's heavy duty haul road and the adjoining railroad on which the heaviest use is during the nesting season. Any disruption of waterfowl areas that would occur has already occurred. Apparently the disruption has been slight since large populations of waterfowl inhabit and nest in the area according to the populations listed in the E.I.S. for Woodall Marsh.
1-470	86	The whooping crane, an introduced species not yet successfully established in this area, should not be treated as if it were successfully established. No one knows yet if it will ever take hold with or without mining activity. Make the distinction clear.
	87	Stream flows will not necessarily be altered from natural states on Slug Creek due to the significant distance of near zero gradient terrain between the creek and the proposed mining activity.

80. These are recommendations of the State Historic Preservation Officer and the State Archeologist. The procedure for clearance as stated is not considered overly hindersome or unreasonable in light of the applicable laws and Executive orders.

81. Text has been modifed accordingly.

82. We do not find the statement self contradictory. The secondary and tertiary impacts to wildlife resulting from the increase of people in the area and their intrusion into the native habitat will compound into major impacts not directly related to the amount of land disturbance.

83. The potential for unavoidable impacts is high. The impacts, as stated in Part 9.2, will be moderate.

84. We have rechecked and find no inconsistency in the figures. We also believe the impacts as described are accurate.

85. The Idaho Fish and Game Department has documented an increase of waterfowl nesting in the upper Blackfoot River drainages. We believe the proposed mining activities into the Diamond Creek, Blackfoot River and Slug Creek areas will affect the nesting and brood rearing activities of these birds.

86. We clearly address habitat that may be suitable for possible expansion of the whooping crane should the reintroduction be successful.

87. The reference to Slug Creek has been deleted.

PAGE		
1-479	88	Conform Chapter VI to new reduced production rate data.
1-488	89	Conform Chapter VII to new reduced producers rate data. Nearly everything listed will change.
1-499	90	Deferred approvals could interfer with lead times necessary to get properties into production. With the delays inherent in the approval system as currently practiced, approval 10 years in advance of actual mining needs may be necessary. This would permit alternative properties or plans to be submitted for approval with some expectation of the ability to continue operation. The long approval lead times are being forced by the very system which this section of the E.I.S. points out.
1-502 to 505	91	A cancellation or defacto cancellation of a lease if it could be substained by the courts would upset the very framework of our national mineral production capability. The thought that this is even considered as an alternative indicates the degree to which our free enterprise system is endangered.
1-509	92	Underground recoveries are lower than those for surface mining since underground will only recover a maximum of 50% of the few highest grade beds which only make up a maximum of 30% of the phosphate resource. This results in a maximum of 15% overall recovery as compared to +90% for surface methods.
1-520	93	Also there is no substitute for phosphate in human nutritional requirements.
1-523	94	The 15 to 20 percent low grade shales are currently used by Monsanto without beneficiation in the electric furnace process.
1-531	95	Restricting the development by selectively permiting deposits to be mined would require a knowledge and expertise in mining, processing, and marketing that no governmental body or agency has yet demonstrated.
1-533	96	In the list of federal and state agencies consulted in the preparation of the statement agencies with a knowledge of economics and balance of payments are conspicuous by their absence.
1-534	97	The assistance of the railroad certainly tends to lead to the conclusion that rail is the only way to go. This should be examined critically.
2-25	98	The Henry North Continuation does not straddle the Little Blackfoot River. It lies entirely north of that stream.
2-26	99	The Little Blackfoot River in one place on this page is stated to support an excellent fishery and in another to have good fishing only near the reservoir. This is confusing. The first statement should be eliminated.

88. This has been done.

89. This has been done.

90. Deferred mining plans could be resubmitted on a schedule determined ample for continued operations.

91. This is an alternative, and as such requires consideration.

92. The Task Force does not agree with the 15 percent recovery. From 30 to 50 percent of the phosphoria could be mined by underground methods.

93. This is so noted in the FES.

94. Reference here is to beneficiation necessary for fertilizer production.

95. The Task Force believes the expertise is available and could be marshalled, as is now being done in the Federal coal leasing program.

96. The Task Force believes that the appropriate and necessary economic inputs have been included in the EIS.

97. The assistance of Union Pacific Railroad in the analyses of transportation of the ore should in no way be construed as a predilection of the Task Force to rail transport.

98. The text has been amended accordingly.

99. The fact that fish exist only near the reservoir is so stated.

PAGE

3-1

100 Monsanto does not indicate rail as the preferred transportation system. It is natural that the Union Pacific would like to have a monopoly on ore transportation.

3-2

101 The Union Pacific has yet to develop an efficient haulage system with no shortage of cars during the beet harvest.

3-3

Monsanto does not necessarily intend to use a rail haulage method. It would require discarding our well developed heavy duty off highway private haul road - truck system with all its inherent flexibility and amortized investment. Changing to rail would require a major capital expenditure at the Monsanto plant site near Soda Springs for acquisition of new land for the plant rail yard and for new dumping facilities including long conveyor systems. Our present plant site and unloading facility does not have the room or flexibility to adapt to rail. We would have to purchase a large quantity of good dry farm land for the rail yard and unloading facility and connect it to our plant with a conveyor system.

102 Among other things this would take a lot of good farm land out of production. We would also have to totally redesign and rebuild our loading facility which is designed for trucks and for simple movement to a new site.

At the mine loading site instead of a simple and compact truck loop rail would require a large track layout which obviously would disturb much more of the Slug Creek Valley than would a truck system. A truck loading site can be kept close to the working area with much saving in short haulage cost and in fuel.

262

3-5

The rail as planned would only accommodate 7,000 tons per day of Monsanto ore. Even at the 1,000,000 dry tons per year production rate this is 1.1 million wet tons to be shipped in a season of approximately 100 working days (5 day week). This would require 11,000 wet tons per

103 day capacity dedicated to Monsanto alone. Let's hope the rest of the railroad planning is more accurate than this.

Will the railroad be economically viable at the reduced projected annual production rates? Would the Slug Creek loop be economically viable at the lower rates?

3-6

It is correctly to assume that Monsanto probably would not use the railroad even if it passed through the Henry mine.

104

3-9

Monsanto could by short extension of its private haul road reach the Trail Creek and Caldwell Canyon mine sites.

It should be noted that the use of a haul road permits one route access for ore transportation, personnel, and supplies

105 while rail requires a separate personnel and supply road. The ore haul road permits separation of mine related from other traffic.

100. It is not our intent to foreclose Monsanto's options regarding the mode of ore transport. Any reference to a preferred railroad mode in conjunction with the Trail Creek or Caldwell Canyon mine plans reflects the opinion of the Task Force that a system that could be used jointly by more than one company would minimize duplication of facilities and consequently reduce impacts.

101. We agree, but the companies served by Union Pacific seem to meet annual production goals.

102. We agree that Monsanto's truck haul system is an efficient and economical method of moving ore, and the benefits of an amortized investment weighs heavily in favor of maintaining it as long as this mode is economically efficient. As operations move to more remote leases with greater hauling distances, economics would likely shift in favor of other modes of transportation.

103. The 7,000 ton daily rail haul from the Trail Creek and Caldwell Canyon mines depicts the Task Force assessment of tonage contributed to the system and does not establish capacity. The difference between the 7,000 and 11,000 ton figure occurs because of differences in hauling season, ie 5 day week, 20 weeks vs 6 day week, 26 weeks used in the calculations.

See Part 3, Chapter I for the reassessment of railroad requirements for the revised annual production rates.

104. The comment is noted. The DEIS did not foreclose this option.

105. Based on communications with Monsanto mining personnel, only special segments of mine worker traffic are permitted to use the haul road. While the ore haul road could permit separation of mine related traffic from other traffic, this does not preclude the need to provide for public access to the general area of mining operations.

PAGE		
3-21	106	All four public road crossings by our private haul road are guarded by traffic activated semaphores.
3-27	107	This page infers that these game losses are in addition to those predicted for the overall effect of mining. Was this intended? This should be clarified.

106. The text has been modified to reflect this.

107. These losses are related directly to the transporation system and are in addition to the "on site" losses due to mine pits and dump sites.

SECTION B

COMMENTS ON SITE SPECIFIC MONSANTO MINE PLANS FOUND IN PART 9 OF VOLUME II

PAGE			
9-1	108	Monsanto operations started in 1952. Plant consumption will remain at about 1 million tons per year through 2000 A.D. The four mine plans will be mined consequently and will provide 40 plus years ore.	108. The manuscript has been changed accordingly.
		HENRY NORTH CONTINUATION MINE PLAN	
9-2	109	Monsanto owns all non-government surface on this plan area. North Henry will be depleted in 3.5 years at 1 million tons per year.	109. The manuscript has been changed accordingly.
9-3	110	Figure 9-1 is in error in that it depicts the plan area as straddling the Little Blackfoot River. The plan area lies entirely north of and does not include that stream.	110. The figure has been corrected.
9-4	111	Figure 9-2 is in error in that the north end of the pit is shown cutting an improved road. The road shown is a dozer trail developed by Monsanto for access to the property over our private land. The waste dump is shown covering the small ridge on the northeast. This is in error. The dump will not cross the crest of that ridge. It appears that the proposed workings are shown somewhat to the northeast of actual location.	111. The figure has been corrected.
9-5	112	Haul to plant distance will be 19 miles.	112. The text has been changed accordingly.
9-8	113	The east side of the pit is in the Shaley Chert not alluvium.	113. The text has been changed accordingly.
9-9	114	Figure 9-3 is in error. Land type association 4 covers the pit area and the entire ridge to the west of the pit.	114. Figure 9-3 is incorrect and has been revised.
9-11	115	No evidence in drilling or in past pits of any water problem through fracture systems.	115. The Rex Chert and the Wells Formation commonly are fractured and contain water in other areas. Although, as stated in the text, drill holes in this area produced virtually no water, there is potential for a broad pit to intercept some fractures containing water.
9-12	116	Riparian cover at south end is south of the site and will not be disturbed. The wildlife section appears to address the entire present Henry Mine site not the 6,500' long North Henry which is the only site under consideration here. Any disturbance from the present operation has already occurred and it is improper to consider these impacts as resulting from future mining of the North Henry.	116. Past impacts have not been included. The proposed new roads and waste dump for the continuation of the North Henry mine will impact riparian habitats and other wildlife habitats not presently impacts by the present mining operation.

PAGE

9-12 (Cont.)

The 150 deer said to winter here winter primarily along the south and west slopes of the ridge west of our present operations. The 6,500 feet long ridge west of North Henry is not capable of supporting nor does it support those animals. You are confusing the present operational site with the proposed site.

The migration route borders the present operation not the proposed operation.

The first paragraph of 6 Wildlife is inconsistent throughout as it talks of the proposed and present operations site as if they were the same location. This distorts the entire wildlife discussion relating to this proposed plan and
117 grossly exaggerates the wildlife impacts predicted for the proposed mine area.

The above comments apply to the discussion of elk also. The 5 to 15 elk winter in or around led one knowledgeable man to observe "around 3 miles and around 3 years ago" which sums this section up very well.

The excellent sage grouse habitat is off the proposed mining site as the site is almost entirely cultivated dry land grain or quaking aspen covered terrain. The other side of the mountain is sagebrush and grass covered which may be the habitat referred to here. That slope is not near the proposed mine area.

265

9-13

The statement on raptors is contradictory. Thirteen species are said to stay year round -- but only one is said to winter on the site. You can't have it both ways. What species winters on the site and exactly where? We would like to confirm this data.

No rattlesnakes have ever been observed on any of the proposed mine sites.

118 The migration corridor for raptors near Grey's Lake is miles away from this site and should not enter into a discussion of this proposed plan as it could not be affected.

The inference is that mining this site will endanger the peregrine falcon which nests 10 miles away. If this is truly the area of influence of a peregrine falcon, each nest is influenced by a 10 mile radius circle which contains over 200,000 acres. Two such nests would cover the whole Idaho phosphate area. Is this reasonable?

Under fisheries it should be noted that the Little Blackfoot has been stocked in the past only near its mouth.
119 The section nearest the proposed mine is dry in dry years. CO_2 charged springs in the lower stream affect its fish carrying ability.

117. All data relating to big game numbers and use areas were taken from the Idaho Fish and Game Department. The data were obtained from repeated aerial surveys and believed accurate.

The dump site as proposed will cover existing sagegrouse habitat.

118. In the North Henry Continuation, habitat is available for 13 prey species known to inhabit southeastern Idaho year round. One raptorial species, the bald eagle, migrates into the area during the winter.

Suitable habitat for western rattlesnakes does occur in the North Henry Continuation, particularly in the proposed dump site. Rattlesnakes have been observed in similar habitats in adjacent areas.

The documented raptor migration corridor east of Grays Lake leads to the conclusion that a similar migration route occurs west of Grays Lake.

The value as feeding area for the peregrine falcons nesting ten miles away is based upon the documented feeding habits of the prairie falcon, a closely-related species.

119. Although primarily stocked only near its mouth, the Little Blackfoot River, according to the Idaho Fish and Game Department, has at times been stocked in other places.

PAGE		
9-14	120	Most of the dry farm land described is owned by Monsanto. Are the indicated AUM's of forage on the proposed mine site and will they be disturbed? I don't think so.
	121	The extension will not only employ 80 people as miners but another 400 directly in the plant which depends on the site for ore.
	122	The Little Blackfoot River offers good fishing only at its mouth several miles from the proposed site, and is too small for other water oriented recreation. It flows through private lands and is therefore, inaccessible to the public. This section makes that stream sound like a sportsman's paradise which it isn't.
	123	It is stated that the lease hold has potential for O.R.V. use, camping, picnicking, etc. The potential is very low since most of the lease is in private ownership or surrounded by private land. This suggests a takeover of public land. Was this intended?
9-15	124	The operation could not be seen from the Blackfoot Reservoir since it is on the other side of the mountain. From SH-34 it can only be seen from a short segment north of Henry and then only when traveling south. Keep in mind that the mine site is low down on the northeast base of the ridge which is on the opposite side from the highway and reservoir and the town of Henry.
9-16	125	Water flows could not accumulate in one channel since a topographic divide separates the north from the south segments. No water could reach Enoch Valley since it is on the other side of a ridge. A water control structure near Station 60 + 00 will completely control surface flow to the Little Blackfoot.
9-17	126	There are not 90 acres of sagebrush grassland.
	127	The migration route to be blocked must be on the south end of the Henry Mine some 4 miles from the proposed site. If so, it is already blocked by the present operation. The migration route map does not in anyway verify the statement that a migration route will be blocked by the proposed mine.
9-18	128	North Henry will not remove critical winter range for 150 deer (see comment of 9-12). That many would have to stand one on the other to crowd onto this 6,500 foot segment of ridge. In addition, the southwest slope which would be the only winter range area is on the opposite side of the mountain from the proposed mine site. The mine site is on the deep snow side where no deer or elk winter. Mining will disturb some summer deer range but not winter range.

120. The text has been modified to reflect these two items.

121. The employment at the processing plant is appropriately discussed in Part 1.

122. We agree that the Little Blackfoot River contributes good fishing only at its mouth. The statement that the stream is too small for other water orientated recreation leaves one to believe the stream is virtually useless. This is obviously not the case. This area, though inaccessible, contributes significantly to the water quality and fish population downstream.

123. This was not the intent. All the write-up evaluates is the use opportunities available on the study area lands regardless of ownership or potential management and development constraints.

124. At the present time test holes and preliminary clearing areas can be seen from State Highway 34, especially while traveling south. Viewing the disturbances is possible from the area north of the reservoir (adjoining flats and hills). Because of the great numbers traveling the highway, aesthetic considerations are very critical. When the last six miles of the Tincup Highway are paved, this corridor will become an important route to the National Park areas from the south.

125. This is so stated in the text. However, the text has been amplified for clarity.

126. The text has been corrected.

127. Map 8 has been corrected to properly show the relationship of the migration route to the proposed mine plan.

128. The proposed mine plan will effectively reduce the ability of 150 deer to reach their traditional winter range. Mine disturbances will also extend beyond the minesite itself. Winter range is not entirely composed of south and southwest slopes. The upper ridges are also used for foraging purposes and the conifers on the north and east exposures are integral portion of the winter range complex as they provide protective and escape cover.

PAGE		
9-18 (Cont.)		Winter range removal for 5 to 20 elk (elsewhere claimed to be 5 to 15) is not factual. The winter range is on the snow free south end west side of the mountain while the mine is on the deep snow north and east side of the mountain. This inconsistency carries throughout the discussion and should be corrected.
	129	What is grouse population based on? Hunters would be surprised to find any blue grouse on the North Henry site and would expect to find almost no sage grouse. A 60 grouse population for these species is wishful thinking. There are ruffed grouse on this area. Peregrine falcons are not even known to use this specific area.
		Is this value of an AUM consistent with the grazing fees now charged stockmen on public lands?
	130	In addition to the mining people employed another 400 will be directly employed by the processing plant dependent on the mine for its ore.
9-19	131	Since this is either private land or surrounded by private land at least in part owned by Monsanto, it is exaggeration to infer it is open to public recreation use especially for O.R.V. and camping use.
9-20	132	Monsanto has had official archeological surveys run on this site and nothing of interest has been identified.
	133	The statement on asthetics is completely in error. As mentioned in comments for page 9-15, the mine site is not visable from Henry or the Blackfoot Reservoir and most of state highway 34 since it is low down on the other side of the mountain. Careless mistakes like this destroy the credibility of an E.I.S. The visual impacts of this mine operation will be very low.
9-21	134	The settling pond to protect the Little Blackfoot River is shown on the plan submitted. The pond could be relocated farther to the south if this would improve catchment ability. Basalt flows preclude mining near the Little Blackfoot River and no mining is proposed near the reservoir. The prohibitory statement is unnecessary.
9-22	135	The displacement of deer and elk will not occur except that due to modification of summer range by the proposed mine. This would affect very few animals. Winter range and migration routes are not affected by this mine (See comments for pages 9-12, 9-17, 9-18).

129. Impact on the elk are factual and in light of the new radio-telemetry data are probably low. The mine pits new roads and dumps plus the offsite activity will adversely effect at least the stated amount of elk.

Grouse population on the area is based on data by Idaho Fish and Game Department. A peregrine falcon has been observed in the area.

Also, please see the above comment regarding deer winter range.

130. No. The true market value of an AUM is about $5.89. In 1976, the charge for an AUM of grazing on Forest Service lands was $1.66 and not considered to be full market value. State and private grazing fees range from $3.00 to $10.00 per AUM.

Employment at the processing plant is discussed in Part 1.

131. The land has the resource potential for these uses and some is presently taking place. Developments such as those proposed also causes impacts to adjacent lands and their use opportunities not just the immediate impact area.

132. The manuscript has been expanded to include this information.

133. Mining will be in the foreground or immediate viewing zones of Highway 34 and the Blackfoot Reservoir. Information on Map 12 (aesthetic viewing zones) shows the viewing zones and the proposed mine.

134. Reference here is made to the engineering adequacy rather than location. Because of the proximity to the Little Blackfoot River, the statement is considered necessary.

135. Raptors are known and identified in the general area which would include the leasehold as hunting range. The statement has been modified to better reflect this perspective.

PAGE

9-22 (Cont.)
135 The abandonment of raptor nesting sites due to this operation is not backed up by statements elsewhere in this statement.

9-24
136 Visual impact will be low (See comments for pages 9-15, 9-20).

9-25
137 Conform Chapter VI with previous comments, especially as to overstatement of displaced animals and from statement of long term reduction of deer and elk as a result of competition from displaced animals. The animals will not be displaced. (See comments for pages 9-12, 9-17, and 9-18).

9-27
138 Modify statement on loss of wildlife to conform with our previous comments. No significant loss will occur on this property.

Comment on "Additional area ... irreversibly and irretrievably committed to the intrusion of mining related changes.", is not justified in view of our previous comments.

9-28
139 Alternative of backfilling before all altered material is mined would cause irreversible and irretrievable loss of large quantities of high quality phosphate ore as a national resource.

Private haul road would be used for about 3 years.

TRAIL CREEK PLAN

9-29
140 Monsanto has a history of making satisfactory arrangements with private surface owners before attempting mining activities.

9-30
141 Figure 9-5. None of the land involved falls within the national forest.

9-31
142 Figure 9-6 infers that rail would be the transportation system used. This is not necessarily so. The haul road method would disturb less of the sensitive valley bottom, would not cross the Blackfoot River or Slug Creek. (See comments relating to Part 3 Volume I).

143 The indicated conveyor route to the south in the direction of Georgetown is not desirable or feasible. Any conveyor route would be intended to go cross country on the shortest feasilbe route to the Monsanto plant about 7 miles away to the west.

135a. According to the Idaho Fish and Game Department, winter ranges and migration routes will be affected.

136. See response to comment 133.

137. See response to comment 135.

138. See response to comment 135.

139. Text has been amended to reflect this point. Use of the haul road has been changed to three years.

140. We find no statement to the contrary in the DES.

141. The figure has been corrected.

142. Railroad, truck haul road, and conveyors are all shown as alternates, with no preference inferred or intended.

143. The alternate conveyor system shown in Fig. 9, page 9-31 of the DES, follows a route indicated by a Monsanto official on March 13, 1975. The intention was that the conveyor would go in a southerly direction as shown, then in a westerly direction roughly paralleling the Wood Canyon road to arrive finally at the plant site.

PAGE

9-31 (Cont.) 144 A haul road stemming off from Monsanto's present road at mile 8 and approaching this property from the west would be the most feasible transportation approach.

9-32 145 Transportation preference was not indicated by Monsanto. Monsanto's preference would probably be off highway trucks, rail, conveyor, in that order.

9-34 146 Total production from this property would be 10 to 30 million tons depending on economic stripping ratio.

147 Land type II (Loess) would not appear to be correct as most of the area is covered by hard rock outcrops of the Wells Limestone or Rex Chert formations.

148 Drill holes have given no indication of potential significant underground water flows.

9-35 149 Figure 9-7. Correct to show the land type association 4 covering most of the mine site.

9-38 150 520 Acres of conifer-aspen is much too high. This site is mostly sagebrush and grass with much rock outcropping at the surface. Most areas other than sagebrush - grass are mountain brush.

9-39 The statements on numbers of elk, deer, and moose are much too high. It is highly doubtful that this site has a year long population of 100 deer although the general area may carry that population. The paragraph is contradictory in that it then strongly infers that the site is not now used by wintering deer. Any claimed losses or displacements of animals should be specific to the site and not expanded to claim losses for unimpacted nearby areas.

No continuous highwalls will be present to block any migration route. We know from experience that both deer and elk will largely ignore humans when migrating unless they are physically blocked.

151 The statement on sage grouse is a masterpiece of contradiction. The unequivocal statement is made that "The area is critical sage grouse wintering area". Then the paragraph goes on to say no information on numbers is available, no strutting grounds are known but grouse may well nest here. Either the information is based on hard fact or it isn't. Do not make absolute statements without documentation. We ask that specific documentation be given here rather than unsubstantiated statements. The statements should be specific to the site not just the general area.

Apparently it is not demonstrated that peregrine falcons use the site as hunting habitat.

144. The purpose of the EIS is to assess the overall environmental impact of the various modes and routes of transportation indicated by the operators as well as a comprehensive rail system suggested by the Union Pacific Railroad. Federal approvals, however, will be required for all transportation routes on federal lands. They may also be required for routes not on federal lands, and may require separate environmental statements.

145. See response to comment 144.

146. The text has been modified accordingly.

147. Transposing the soil data from available maps to the site specific maps by enlargement results in some generalization. Some very small areas may not be typical of the soil type, but we find the typing to be generally accurate in this area.

148. The Wells limestone is known to be fractured throughout the region. Water moves readily through these fractures. Although the exploratory drill holes apparently did not intercept any fractures, they are known to exist.

149. See response to comment number 147.

150. A recheck of recent aerial photographs shows more than 480 acres of conifer-aspen.

151. The population numbers of big game are from the Idaho Fish and Game Department and relate to the proposed mining area.

As shown in the mining plan, one highwall will be continuous for approximately 2.5 miles.

The statements on sagegrouse have been revised for clarity and consistency.

PAGE

9-40

152 The grazing values shown are 2,500 sheep months southeast of the site and 2,130 sheep months on adjacent state lands. Why are these off-site evaluations made instead of specifying the on-site grazing values? Are the dollar values given consistent with grazing fees now charged on public lands?

9-41

153 The property for the most part is privately owned. Why is it suggested that the public has camping and other recreational rights on the site?

154 An official archeological survey has now been made and can be made available to you.

155 This site is anything but "remote" with good roads on all four sides and sheep camps and access roads all over the site. Asthetic values as described on site are non-existent.

9-42

156 Water run off from this site could not be concentrated in one channel without tremendous effort to do just that. This 140 cfs water flow statement arouses artificially created concern. Use a probable level approach.

9-43

157 Modifications to the dump design can keep one and maybe both springs uncovered. The drainage channels (referred to as stream channels) would be french drained. We expect that some of the dump material may be used to backfill some pit areas where ore loss will not result, thus increasing the reclaimed pit area and decreasing dump space.

158 Very flat gradients between the dumps and Slug Creek, as well as the large distance and sediment catchment structures can easily keep sediment from reaching Slug Creek. This site is more ideally suited to sediment control than any other site.

9-44

159 The statement on critical winter range alteration is in conflict with statements made on page 9-39 where it is strongly inferred that deer do not now use this for winter range. If that is true, the range is not "critical". The word critical is over used throughout this statement. The actual wintering elk count for the specific site should be documented. Is the big game count for the area or for the specific site being discussed?

All of the 100 deer and 15 elk are spoken of as being displaced to adjacent range. If indeed there are this many animals wintering on this specific site now (seems unlikely), certainly only a part of them would be displaced. The winter range would be on the south and west facing slopes and the top of the ridge which are mostly snow free. Our mining will take place on the east side of the ridge crest and eastward from there. This should have minimal effect on any animals wintering on site.

Refer to previous comment on grouse (Page 9-39).

152. Grazing capacities of lands on the leasehold are similar but generally lower in productivity. This has been added to the text.

153. The uses listed in the write-up are and have been activities occurring in the area. These activities, in their current numbers, have been compatible with private land in the past. When uses are placed upon these lands that eliminate the compatibility, recreation opportunities are lost, regardless of where it occurs.

154. The manuscript has been expanded to include this information.

155. The text has been modified.

156. This is so stated. The text, however, has been amplified for clarity.

157. The comments are noted. Modification of the dump design will require revisions of the mining plans as submitted.

158. The mining plans that were presented are vague as to the number, type, location, design criteria and need for erosion control measures. Experience has shown that without detailed plans and careful construction at the proper time, erosion control efforts will be inadequate. While excellent locations for sediment catchment structures may be available, the suitability of vague erosion control concepts cannot be evaluated unless comparisons of needed versus available catchment capacities are developed.

159. The numbers of game cited apply to the proposed mining area. The text has been modified in places and reference to the peregrine falcon has been deleted.

PAGE

P-44 (Cont.) Peregrine falcons are not known to use this site even for hunting.

160 The 2,870 sheep months of forage use is not consistent with statements on page 9-40. Are these on the specific site? How would sheep forage on adjacent lands be lost?

9-45

161 Do assume that the ore haul will be by off highway truck. A haul road crossing of Trail Canyon Road will result in less net exposure to traffic accidents since the present private haul road crossings of the very busy Blackfoot River Road and the less traveled Enoch Valley Road would be closed.

162 The surface of this site is private land so it is improper to attribute recreational use losses to mining the site. It is now not open to camping or O.R.V. use. What is the camping area just northeast of the site? I have no knowledge of such a public area within several miles!

163 "Severely decrease hunting opportunities, particularly for deer", would seem to be a gross over statement not substantiated by fact. Only a portion of any existing (?) deer herd would be "displaced" at worst (See comments for page 9-44) and in addition, this is private land whose owners resent intrusion.

9-47

164 Any such road crossing would have a traffic activated signal as we already have at four crossings of our existing haul road.

Railroad would also cross roads (Slug Creek, etc.) and have same crossing safety problem. Net safety would increase with truck (See comments for page 9-45).

165 Sediment catch structures will be constructed wherever needed to insure proper sedimentation control.

9-48

166 The displacement of animals has been discussed in comments for pages 9-39 and 9-44. These comments are applicable here and to the statement on blocked migration routes.

Suddenly without any substantiation or backup we see here that 200 to 300 grouse will be displaced.

167 The archeological survey has been completed.

160. The values given represent $5.89 per cow month and $1.56 per sheep month. These are the estimated 1974 market values on Forest Service lands. In 1976 Forest Service grazing fees were $1.66/cow month and .325¢/sheep month. Fees charged for grazing on Federal lands are not considered to reflect fair market value in this report.

161. A statement to this effect has been added.

162. Mining activities on or off Federal lands to the extent proposed restricts or eliminates big game migration and user access thus decreasing recreation opportunities. Roads in the area are used for over snow and off-road vehicles. Increased traffic generated by mining activities will curtail this use.

The camping area referred to is along Slug Creek and the Blackfoot River where dispersed use is occuring.

163. This statement is correct. The loss of 100 deer plus the per annum fawn crop from these deer would not be available. The deer do not stay on private lands year long but tend to occupy State or Federal lands during the hunting season.

164. Traffic activated signals greatly reduce the liklihood of an accident, but they cannot fully eliminate the potential as long as control of the vehicle rests with the driver.

We cannot agree that net safety would increase by using trucks. Forty-seven round trips by Monsanto's haul trucks would be necessary to equal the ore hauled by one unit train (100 cars). This would be a 47 times greater potential for traffic conflict at each crossing.

165. Until engineering designs of such structures are available for evaluation, we must assume the possibility of sediment movement to streams.

166. Page 9-44 of the DES states that about 1,000 acres of winter habitat for sage grouse will also be altered.

167. The manuscript has been expanded to include this information.

PAGE

9-51

168 It is hard be believe that annual forage production for a reclaimed acre will only be half its present value since much of the area now has hard rock exposed at the surface.

169 The previous comments on elk and deer displacements and on sheep months should be applied to this page.

9-54

170 Conveyor routes would be 7-8 miles long and would be the least costly in terms of energy use.

Truck is the method of ore transport preferred by Monsanto The haul road would spur off from our present haul road at the Blackfoot Bridge property and approach the Trail Creek site from the west.

CALDWELL CANYON PLAN

9-55

171 It should be pointed out that Monsanto holds a state phosphate lease one mile to the north of this site on the same outcrop and owns in fee the surface and minerals adjoining the south end of the proposed mine area. In addition, we have purchased over 800 acres of the private surface on this site.

No past mining has occurred on this property.

9-57

172 The dates of activity should only be used as approximation since this is far in the future.

Monsanto does not provide for stockpiling marginal ore since by using all the beds remotely near ore grade, we get a good furnace blend and at the same time recover the maximum amount of the resource. If in the future, a marginal material is moved but not delivered to the plant, it will be set aside for future recovery. We are currently on the south end of the Henry Mine placing all phosphorus waste shales where they can be recovered. They only average 2% P. This is done at the order of the USGS at considerable extra cost.

Monsanto intends to backfill wherever it will not result in loss of ore which would not be conservation of a non-renewable resource.

9-58

173 Figure 9-10 shows the proposed railroad crossing Slug Creek Road at least 5 times. This would result in more crossing hazards than the private haul road to Trail Creek Mine, which was identified several times as a hazard. The proposed rail route also crosses Slug Creek at least twice and wanders around on the sensitive marshy Slug Creek bottoms.

What is apparently a proposed haul road is shown on this map roughly paralling the Slug Creek Road and high up on the hill slope. This was not proposed by Monsanto. We would propose using a haul road which would take the most

168. The 50 percent reduction is considered a good estimation of reduced production. Reduced long-term productivity is unavoidable without intensive cultural treatments and soil amendments. On a particular (naturally unproductive) site, as you state, the reclaimed productivity may not differ greatly from the undisturbed. Where we are dealing with the disturbed area as a whole, the reduction figure is reasonable.

169. We believe the statements as presented are clear and sufficient.

170. The primary conveyor system indicated in Figure 9-6 following a route indicated by a Monsanto official on March 13, 1975, measures ten miles from the pit to the plant.

171. Inventory of mineral rights, State phosphate leases and surface ownership held by the company but not covered in the mining plan presented would be superfluous.

The comment is noted.

172. The comment is noted.

173. Figure 9-10 is intended only to show general location and relationship of the mines and various transport facilities to the existing facilities and topography.

A drafting error on Figure 9-10 has been corrected.

PAGE		
9-58 (Cont.)		feasible route west to connect with our haul road extension to the Trail Creek property. This would result in the minimum disturbance to the Slug Creek area.
9-59	174	Middle waste shales have been shown by USFS to be well suited to revegetation use where topsoil is not available.
9-62	175	The Caldwell Canyon stream is stated to be perennial. This is a small stream. Its flow should be stated if known.
9-65	176	Is the "critical winter range for elk" specifically on the proposed mine site or simply in the area? Do all 60 elk winter on the specific site or just in the area? Would the migration route for deer be blocked with the unmined interval of outcrop as planned giving access through Caldwell Canyon? Is the "critical winter range for sage grouse" on the specific site or just in the general area? Where are the conifers on the specific mining site which harbor the wintering blue grouse? It would seem that populations, wintering areas, and ranges that are general for the entire Schmid area are being attributed to the specific mining site. It is important that general area populations be identified as such and only those populations on the specific mining site be identified as located there.
9-67	177	The Caldwell Canyon road is simply a set of wheel tracks.
	178	Page 9-66 states there are no fisheries in the ephemeral drainages. Under 4 Recreational Resources fishing is listed which conflicts with the first statement.
	179	Much of this area is in private ownership. Recreational opportunities are restricted by landowners resentment of intrusion.
9-70		The tight nature of the Phosphoria formation usually keeps water out of the pit.
	180	The alluvium would not be adjacent to the pit and so should not offer a water problem. The small spring under the dump could be easily handled by a french drain if the dump design could not be modified to leave the spring open. Silt can be prevented from reaching Slug Creek by construction of sediment catchment basins as required.

174. The Task Force agrees that middle waste shales are more suitable for plant growth than other mine waste materials, but not that they are "well suited". Compared to topsoil under aspen, the waste shales are very poor.

175. The stream is known to be perennial. There are, however, no measurements of rates of flow.

176. The critical elk winter range is both on the specific site and in the general area adjoining the minesite, waste dumps and transportation facilities.

Undoubtedly some deer will migrate through the undisturbed portion of Caldwell Canyon proper. However, due to the length of the proposed mine pits, new haul roads, and related problems, the perpetuation of this significant deer migration route will be doubtful.

The critical sagegrouse production and winter range occurs on the immediate proposed minesite, new transportation systems, etc. and in the general area.

The conifers occur on the upper ridge elevations and on the north, east and northeast exposure. The mine pits will disrupt "up slope" migration by blue grouse from their nesting, brood rearing, summer range to their traditional wintering area.

177. "Utility roads" as used in describing the Caldwell Canyon road implies a pair of wheel tracks.

178. The text has been clarified to indicate that there are no continuous fisheries on the leasehold, and that recreational use in the area is on nearby streams.

179. The access referred to is an existing facility or inventory of what is there. References to recreation uses are the potential situation, not a developed public resource. All lands have recreation potential. Restrictions to use are not fixed as are resource capabilities. Private land and private interests can also be an important portion of the total recreation resource.

180. Concur; however, it is not uncommon for the phosphoria to contain and yield water.

Figure 9-10 of the DES and the geologic map of the Dry Valley Quadrangle (U.S. GS Bull. 1015) indicate that the south end of the pit will be in alluvium. However, little, if any water probably will be encountered.

With regard to silt reaching Slug Creek, see response to comment 165.

PAGE		
9-71		Will all the 705 acres of elk winter range be disturbed? Would the entire 60 elk be displaced or only a portion of them?
	181	It is improbable that elk will be displaced from "an adjacent area of 4 square miles". This would be off-site and would receive little people pressure. We know from experience at the presently operating Henry Mine that elk will winter right next to ongoing mining operations. Therefore, it is not correct to say that those elk will be displaced.
		The migration route through Caldwell Canyon will be left open as no mining is planned for that portion of the deposit.
		The 500 acres of critical winter range for sage grouse would appear to be a mile south of the proposed mine.
9-72	182	The mines will support, in addition to the miners, direct employment of 400 people at the Soda Springs processing plant totally dependent on these mines for the raw material.
9-73	183	Stream channels will not be covered except as necessary and dump modifications will be made accordingly.
9-74		It is doubtful all the elk, deer, and moose will be displaced. Only a portion will actually leave.
	184	It appears that duplication of sage grouse information is suggesting greater than actual impact.
9-77	185	See previous comments on animal and bird displacements.
9-80	186	It may not be practical in view of the decreased demand projection to build the railroad as proposed. However, if the railroad were to be built and Monsanto had to use it, the impacts would be greater than portrayed on this page. Truck haulage would use a simple loading point turn around loop and no additional land at the processing site. Rail, on the other hand, would require yard trackage at each end sufficient for 100 to 150 cars. At the processing plant, the site cannot accommodate a rail yard so dry farm land would have to be acquired and used for this purpose. A long conveyor would feed from the unloading point to the plant. A rotary dumper would be necessary. At the mine site, ore haulage roads from the pit to the rail loading site would be required. In addition, access roads to the mine site for transportation of personnel and supplies would be needed. To convert to rail would require discarding the major haul road, loading facility, and unloading facility which we are now operating. These comments apply to both the Caldwell Canyon and the Trail Creek mine sites.

181. According to the proposed mine plan, 705 acres will be disturbed. These are currently used by elk for wintering purposes. It is also probable that the "off site" impacts to the elk (the most sensitive big-game species of the area to human activity) on the adjacent areas to the specific minesites, dumps, transportation facilities will be significant.

There is additional deer migration through areas proposed for mine pit locations, other than Caldwell Canyon proper, which are disrupted.

Portions of the critical sagegrouse winter and production areas are immediately "on site" of the proposed mining.

182. The employment of the processing plant is appropriately discussed in Part 1.

183. The comment is noted. The Task Force believes that stream channels should not be covered if alternate dump sites are available.

184. It is the professional judgment of biologists that the stated numbers of animals will be displaced on the impacted area. There is no duplication of sagegrouse information given; rather a description of the type of habitat loss is given.

185. See response to comment number 184.

186. See response to comment number 100.

PAGE

9-80 187 It is possible that Monsanto may elect to convert to rail haulage, but for the reasons mentioned above, and others, we do not now feel this would be desirable from an economic or environmental standpoint.

BLACKFOOT BRIDGE PLAN

9-81 188 Monsanto owns much of the private surface involved as well as off-site surface to the southwest.

No past mining on this property. Prospecting and drilling work to date was reported to the USGS along with appropriate geologic maps.

9-82 189 Figure 9-13 does not show Monsanto's private ore haul road. The railroad was constructed along the east edge of the haul road about 6 years after the haul road was built in 1959.

9-83 190 Figure 9-14 does not show the west dump proposed on our plan. The streams shown running through Woodall Marsh are incorrect since no defined channels exist for streams from the east once they enter the marsh. These streams are intermittent and disappear in the marsh to the west.

9-84 Figure 9-15 does not show the west dump.

9-85 The property would be depleted in 6 years. Start up is indefinite since this may be 40 years from now or it could be earlier. This property is an "insurance property" since it is south of the river and close to the plant and we own most of the surface.

191 Ore will be trucked to the processing plant over the existing haul road.

We anticipate using all material close to ore grade as we now do. There would be no marginal material left to stockpile.

9-86 Backfilling of pits would be done whenever it would not cause the loss of altered ore.

192 A general note applicable to all plans is that our waste dump slopes in actual practice at Henry are generally less than 22°. This practice will be continued wherever possible.

Portion of the dump sites on adjacent private land belong to Monsanto.

187. See response to comment number 102.

188. Surface ownership of the leaseholds is so stated. Discussion of land ownership, outside the limits of the leasehold would be superfluous.

189. Figure 9-13 adequately serves its purpose as a location map.

190. Figures 9-14 and 9-15 have been corrected.

191. This comment seems to reflect the most recent prediction of future production by Monsanto, and not to alter the original mining plan addressed by the EIS.

The stockpiling of sub-marginal phosphate rock, and the decision to backfill or not to backfill mine pits is one to be determined between the lessee and the U.S.G.S.

192. The 22° maximum slope is the equivalent of 2.5 horizontal to 1.0 verticle. The U.S. Forest Service now requires fill slopes on waste disposals on the Caribou National Forest to be no steeper than 3.0 to 1.0 or about 18 degrees.

PAGE

9-89 193 Land type association 11 does not exist on the ridge to be mined. This should be land type 4.

The northeast dump does not cover an intermittent stream channel. The only such channel begins well north of the dump site.

The west dump site will be modified so that the stream channel will not be covered. That stream is perennial only because of a holding pond Monsanto built years ago to provide water for alaying road dust. It is a very small stream at best and should be classified intermittent. It disappears into the travertine marsh to the west and does not flow in a recognizable channel to the Blackfoot River.

The north pit does not cover any marsh since it is located totally on the slope of the ridge and does not extend to the flat. The west dump does cover part of the flat and in the southwest corner does encroach on the fringe of the 194 marsh. Elsewhere that dump occupies the lower slopes of the ridge and the gently sloping "flat" at its base. That flat is not marsh and in the past has been cultivated. It is firm ground and can be driven across by any vehicle except when snow prevents it. The marsh is to the west and south. In any event, the dump will be moved closer to the pit edge and modified to prevent the encroachment on the marsh on the southwest and to establish a wider buffer zone over the rest of the area.

The south pit area is high on the east side of the ridge. That slope drains to an intermittent stream. Because of the intermittent nature of the stream, Monsanto in years past constructed cattle tanks to provide grazers with water in that area. That stream does not drain the marsh, it drains into the marsh. It flows, when it does, north then west.

9-90 195 The mine site is land type 4.

9-92 The marsh lands along the east edge of the flatlands to the west are on the other side of the mountain from the south pit. 196 They are a result of Woodall Spring and associated springs which are deep seated fault controled springs and would not necessarily indicate ground water on the mine site.

No lava exists where it would abut the pit on the north. 197 Drilling into the Wells formation does not indicate potential water problems.

The north pit was purposely terminated at the top of the slope to the river. The sacrifice of this easily mined high 198 quality ore was considered desirable to protect the river from any pit water run off. As designed all pit run off goes into the pit.

1

193. See response to comment number 147.

194. The interpretations of the dump locations have been reanalyzed and the text modified as appropriate.

195. See response to comment number 147.

196. Our data indicate that the north pit is on the west side of the mountain, and that the floor of the pit will be lower than the marsh lands. It is true that this does not necessarily indicate ground water at the site, but does suggest that the water table could be at about the level of the bottom of the pit.

197. Reference to lava has been deleted. However, drilling may have missed fractures in Wells Formation.

198. The statement is so noted.

PAGE		
9-93	199	Do 50 to 75 deer winter on the specific mine site or do they winter on the southwest facing snow free ridge tops and faces to the west of the south pit? If the latter is the case, as we think, there would be no disturbance of this winter range by the mining operation or at worst the disturbance would affect only a portion of the wintering deer. Elk use the site as only a small transitory part of their range. The migration routes would not be blocked as the canyon through the middle of the site will not be mined.
9-94	200	The waterfowl population including swans, when present, primarily inhabit the area far to the southwest of the mine site where most of the marsh is located. It is incorrect to say that the main marsh is adjacent to the mine site when it is in fact up to several miles away. It should be kept in mind that Woodall Spring furnishes most of the water for the marsh which is located primarily southwest and west with some portions located northwest of the spring. The marsh area is readily identified from aerial photos. Apparently, swan are transitory visitors to the marsh, not permanent residents. Please distinguish between the waterfowl and shore bird populations existing on site (very few) and those inhabiting the general area (many) to avoid exaggerating the effect of mining.
9-95	201	Apparently, the peregrine falcon has not been observed to use the site as a hunting area. Is the peregrine falcon nest active or not? Has this bird been observed on the specific mine site and when? Do not infer its presence from hypothetical situations.
	202	The seven siltation control structures proposed and others if necessary will control siltation carried by surface waters.
9-96	203	The utilities would not be disturbed by mining this site.
	204	The site is almost entirely private land and is surrounded by private land. Recreational access to the site is not possible without landowner's permission. O.R.V. use does not have any potential considering the private land situation.
9-97		There is no public access.

199. The 50-75 deer noted winter on the specific minesite and in the overall lease area. The deer use all aspects and exposures for foraging purposes and for cover.

Elk have been observed wintering in the area. The overall mine pits and new haul roads will have significant impacts on the existing big-game corridor.

200. According to the mining plans as submitted, the pits are not located several miles away. Some portions of the north pit are within one-quarter mile of the marsh.

201. The area is suitable peregrine falcon hunting territory. Peregrine falcons have been observed in the general area recently. No data are available on whether the peregrine nest was occupied in 1976.

202. The seven proposed siltation control structures are based on limited hydrologic data. This apparently is recognized in that part of the comment that suggests others if necessary.

203. This comment has been added to the text.

204. The access referred to is an existing facility or inventory of what is there. References to recreation uses are the potential situation, not a developed public resource. All lands have recreation potential. Restrictions to use are not fixed as are resource capabilities. Private land and private interests can also be an important portion of the total recreation resource.

PAGE

9-98 The streams are not perennial. No run off from the pits could reach the Blackfoot River as all drainage is back into the pits. The planned 7 sediment control structures and
205 others if needed will prevent sediment from dumps from reaching the river. The west dump will be modified so the intermittent stream channel will not be covered.

9-99 206 We do not anticipate a pit water problem requiring dewatering.

The wildlife and bird impacts are stated as absolute when, in fact, it is improbable that these numbers exist on site or even in an offsite area that could be affected by the mining operation. We know that mining on this site could not conceivably impact the 1,000 geese and 2,500 ducks which primarily inhabit an area up to miles from the mining site.
207

9-100 The migration route map does not show a route which could be blocked by the proposed operation.

The marsh land habitat will not be altered and could not affect all waterfowl adversely. It is not reasonable to claim damage to the entire population of huge Woodall Marsh which extends miles from the mining site.

Claiming adverse affect on prarie and peregine falcons which are not known to hunt the area is not reasonable.

9-101 Will, in addition to perhaps 100 miners, provide employment
208 for 400 people at the processing plant which depends totally on these leases for its ore supply.

9-102 The proposed west dump (which is erroneously stated to be in Woodall Marsh) will be modified to provide more buffer zone and so as to not cover the intermittent stream channel in the southwest corner.

The second sentence of the last paragraph shows lack of home-work on this subject.

Monsanto's main ore haul road has run nearly the entire
209 length of the east edge of Woodall Marsh for the last 18 years. This is right on the edge of the marsh. During that time from mid-May until November 1 of each year (the entire waterfowl nesting and rearing season) extremely large ore trucks have hauled ore 20 hours per day.

For 10 years, the railroad which was constructed on the haul road right of way (on the edge of the marsh) has hauled ore during the nesting season.

Apparently, from the vast numbers and variety of waterfowl
210 and shore birds that the E.I.S. on page 9-94 says currently inhabit the marsh (1,000 geese, 2,500 ducks, sand hill crane, trumpeter and whistling swan, etc.), this constant

205. The stream fed by Woodall Springs has been confirmed by field observation to be perennial. The proposed plan indicates that a segment of this stream is to be covered by a waste dump. Until the pits are sufficiently developed, runoff will move toward the Blackfoot River. The effectiveness of the sediment control structures cannot be evaluated fully until engineering designs have been developed.

206. Although not anticipated, encountering of water in the pit is possible.

207. The numbers stated are correct for the area to be impacted. The proposed pit comes within 1/4 mile of Woodall Marsh.

The map has been changed to correctly show the relationship of the migration route to the proposed mine plan.

It is correct to say that the mine will not effect the marsh land habitat per se but displaced birds, etc. from the area closest to the mining activity will have to compete with the total area population for the remainder of the habitat which is farther from the heavy activity area. Peregrine and prairie falcons have been observed in the area.

208. The employment at the processing plants is appropriately discussed in Part 1.

209. Micrograms per liter appear to be more generally acceptable and are consistent with the way trace elements throughout the report have been reported.

210. The population now will be subjected to a new mine pit within one-quarter mile of the marsh with associated activity plus almost one-third more hauling equipment traffic. It is believed that this amount of activity will surpass the "tolerance threshold" of the avian species present.

PAGE

9-102 (Cont.)

210 heavy equipment use has not affected the ability of the marsh to attract and support these birds. You say on one hand that mining or transportation activity will severely damage bird populations in the valuable habitat, and at the same time, refuse to recognize that these populations have co-existed with extremely heavy transportation activity for the last 18 years.

211 Seven catchment basins (See Exhibit E, Monsanto Plan) were proposed in our plan for drainages below the mine to protect the river. The plan also indicates a significant undisturbed section of the outcrop will be left unmined near the river to protect the fishery.

Those who wrote the section on "additional mitigating measures", do not appear to have either looked at our plan or to have visited the site. It would be difficult to have so many misconceptions if either the plan or the site had been studied.

212 This section should be rewritten to reflect mitigating measures already included in the plan and to show a recognition of the existence of the haul road and railroad. It and all other sections relating to the Blackfoot Bridge Plan should recognize the true spatial relationship of the Woodall Marsh to the mine site.

9-103

The pits will be backfilled wherever altered ore will not be lost by doing so.

213 The dumps are not proposed to be located on the marsh, therefore, the dump stability problem indicated here will not exist. Solid Wells Limestone is a good foundation.

This page mentions for the first time disturbance of winter range for 10-20 elk. This is not substantiated elsewhere in the E.I.S. In any event, it is unlikely the entire big game population of the area would be displaced by site specific activity. Only a portion would be displaced.

214 Previous comments on the waterfowl and shore bird impacts apply here. It should be rewritten to reflect the fact that the body of this population is located up to miles from the mine site.

Absolute statements concerning the sand hill crane and peregrine falcon are not substantiated. Pages 9-103, 105

211. The text has been modified to reflect this.

212. These statements are based upon the submitted mining plan and knowledge of ground condition. We believe the mitigating measures as specified are appropriate.

One dump as proposed was located on a perennial stream and all surface erosion from the disturbed mine areas could result in an influx of sediments into the Woodall Marsh.

213. The pits should be backfilled as soon as possible as a rehabilitation measure.

214. On page 9-93 of the DES, mention is made that "Ten to 20 elk inhabit the area". Elk are the most senstive big-game species to human encroachment and would not only abandon the specific site area but also the adjoining areas.

Portions of the new mine plan show a new pit within one-quarter mile of a relatively undisturbed portion of Woodall Marsh. The additional extraction equipment and ore transport equipment activity traffic along the haul road will have impact on the waterfowl population in the area.

Sandhill cranes are known to use Woodall Marsh for nesting purposes. The riparian vegetation with the ensuing high waterfowl and passerine populations in Woodall Marsh, is peregrine falcon habitat. Peregrine falcons have been observed in the general area by professional people in the past.

PAGE

9-106 The entire game population of the area will not be displaced by site specific mining activity.

215 The waterfowl displacement would not be significant since the marsh will not be disturbed.

9-109 The haul distance to the plant is 8 miles.

216 It should be pointed out that mining this site will not require the construction of any new transportation systems. The existing heavy duty haul road would be used. It now runs directly through the proposed mine and has already been in use for 18 years.

215. The entire game populations of the area will be displaced by varying degrees, not only from the specific site but also from adjoining areas. If the habitat is removed the area becomes non-usable for at least that period of time it was traditionally used.

Waterfowl displacement will be significant with the new panel opening within approximately 400 yards of a heretofore relatively undisturbed portion of Woodall Marsh.

216. The haul distance to the plant has been changed to 8 miles.

SECTION C

COMMENTS CONCERNING AIR AND WATER

The purpose of this testimony is to discuss the air and water quality aspects of the Environmental Impact Statement. We feel there are several errors, questionable items, and unfortunately, misrepresentations, or hopefully misinterpretations, of facts would be a more appropriate statement.

217 One of the most obvious problems concerns the chart on page I-138 reporting water analyses. Parameters, from cadmium to zinc, were evidently intended to be expressed in µg/l, which is one millionth of the numbers indicated.

Expressed as ppm, more commonly used and understood, results for mercury as an example, would be 0.0001 above the Monsanto outfall, the outfall would be 0.0001, and the creek below would be 0.0002 ppm. The following chart gives the correct values which are expressed in parts per million.

	Soda Creek Above Monsanto Outfall	Monsanto Outfall	Soda Creek Below Outfall
Cadmium	0.000	0.002	---
Lead	0.002	0.002	---
Mercury	0.0001	0.0001	0.0002
Molybdenum	0.001	0.093	---
Selenium	0.002	0.031	---
Vanadium	0.004	0.020	---
Zinc	0.060	0.020	0.004

218

The changing of numerical units can be quite easily accomplished but the

217. The text has been corrected.

218. Micrograms per liter appear to be more generally acceptable and are consistent with the way trace elements throughout the report have been reported.

218 damage done by giving incorrect data to non-technical people can hardly be overcome. Witness the testimony by certain witnesses at the original hearings when the incorrect data were cited.

Fluoride, expressed as ppm, is easily discernable as inaccurate from the ratio of the three numbers. Adding water containing 8.8 ppm fluoride to one containing 2.8 ppm can hardly result in one containing .9 ppm fluoride. The Soda Creek Study correctly indicates that the first two numbers are ten times too high. These results are as follows in ppm Fluoride:

219

Above outfall	0.34
Outfall	1.18
Creek at Soda Springs	0.34

Other samples have been taken previously by the state agency with almost identical results. Copies would be available at Pocatello.

282

220 The instantaneous discharge (cfs) can also be readily detected as erroneous from the ratios of the three numbers. It is quite evident that adding 9.0 cfs to 81 cfs cannot equal 74. The indicated 9.0 cfs is more than twice any actual flow. Page 1-137 correctly reports an average of 3.4 cfs per day during 1974.

221 However, the completion of the study on Soda Creek indicates the correctness of the statement on page 1-138 "that Monsanto's effluent, which consists of cooling water, was not significantly affecting the chemical quality of Soda Creek at the time samples." There is plenty of evidence from state analyses to rephrase the sentence to read "Monsanto's effluent does not significantly effect the chemical quality of Soda Creek."

219. Although we have no reason to think that the fluoride concentrations shown are in error, we see no conflict with your implication that the outfall is not significantly affecting the quality of Soda Creek water. That fact that the fluoride concentration below the outfall is lower than that above probably reflects changes imposed on the stream flow and chemical make up between the outfall and the city of Soda Springs where sampling occurred.

220. The data refer to an instantaneous measurement made at the City of Soda Springs and probably reflects loss of water from the stream channel between the outfall and the point sampled, rather than errors of measurement.

221. See response to comment number 219.

It is suggested that the maximum value of 1.5 ppm for Fluoride in drinking water stated on 1-136 be upgraded to reflect the value as stated in the Interim
222 Primary Drinking Water Standards of the Safe Drinking Water Act. The upper limit at 55° F average maximum temperature now becomes 2.2 ppm.

The most disappointing aspect of the air quality section is in the area of the vegetative Fluoride results. The lack of understanding or at best of stating that technology can and has reduced many of the quoted numbers contributes to the problem. It was necessary to go back six years from the present time to select an individual sample (1-170) where the "greatest measured concentrations were 1.4 to 1.9 $\mu g/m^3$. There was no need felt to state that this sample was
223 taken just across the road from Monsanto property or that this figure has been reduced consistently to only 19 percent of the stated amount. It was not
283 mentioned that with alfalfa especially, samples are already purposely biased to insure maximum results are being attained for protection of cattle. Alfalfa is sampled by cutting the top seven inches of the plant, which is frequently about one fourth of plant length. With Fluoride concentrating in the leaves, the hay crop is always less than the alfalfa sample taken just before cutting.

It is quite interesting to note that the Idaho fluorine standards are mentioned on page 1-190 along with the statement of the highest results ever found in either Pocatello or Soda Springs. This in itself is improper because the standards are for forage. They are designed for the protection of cattle in
224 pasture areas or for hay fed during the winter season. Note that following the regulations on page 1-190, the following statement is made: "Fluorine concentrations measured in grass within 2 miles of the processing plants at

222. The text has been changed accordingly.

223. The data in the following table compare the number of samples containing 40 or more parts per million of fluorine for the years 1971 through 1974. These data indicate increases between 1971 and 1974, in the number and percentage of samples of 40 ppm or over:

Date	Total No. of Samples	No. of 40 ppm F or over	% 40 ppm F or over
1971 First 6/21	33	3	9
Second 7/21	20	1	5
Third 8/19	26	4	15
1972 First 6/19	38	1	3
Second 7/21	14	1	7
Third 8/16	32	3	9
1973 First 6/26	38	4	11
Second 8/13	35	6	17
1974 First 6/26	40	6	15
Second 8/21	35	12	34

Pages 1-166 and 1-167 of the DES describe the state-of-the-art in Idaho for the conversion of fluorine content in forage to concentration in the ambient air. The admonition regarding the use of the various conversion factors, and the variable that enter into the conversion, are well documented.

224. The data are not inconsistent. That shown in Figures 1-18 and 1-19 are averages of several samples; ranges of samples as stated are also correct.

both Pocatello and Soda Springs ranged from 50 to 220 ppm; in sage, they ranged from 170 to 1100 ppm." Is this statement correct or are the conflicting graphs
224 of these results on page 1-187 correct? Note that it has already been stated that the maximum measured concentrations near the two Soda Springs plants were 1.34 to 1.79 $\mu g/m^3$, which represents 161 ppm, and 1.4 to 1.9 $\mu g/m^3$, which would be approximately 169 ppm.

It appears that in one section of the report the highest available individual number is searched for and in another section of the report on 1-467 the lowest possible concentration of fluoride injurious to any plant is cited as follows: "Fluorides in concentrations as low as 0.1 ppb (parts per billion) have injured plants in localized areas....." It is suggested that instead of using the fluoride effect on some exotic plant that vegetation indigenous to the area be used to correct a badly distorted reference. For example, alfalfa, one of the most important and susceptible crops in the area, can be exposed to over ten
225 times the amount cited above for 120 days before any markings appear. It is therefore evident that there has never been any damage to area crops from fluoride. In the State of Tennessee where some of these exotic crops are present the standard for ambient air are as follows:

Time	$\mu g/m^3$	ppb by Volume
12 Hours	3.7	4.5
24 Hours	2.9	3.5
7 Days	1.6	2.0
30 Days	1.2	1.5

225. Reference to alfalfa has been added to the text.

225 This makes the citing of vegetation which is damaged by 0.1 ppb even more ludicrous when 1.5 ppb is the 30 days standard.

226 There is absolutely no recognition that technology can and has reduced high numbers quoted. There is no mention, for example, that the average forage samples in the Soda Springs area for 1975 was 24.8 ppm fluoride. If the object of the Environmental Impact Statement was to exaggerate the worst possible conditions the survey has certainly been successful in the fluoride area.

226. The average for a given year is meaningless, inasmuch as the standards are set for a 30-day period. An exceedance during a given 30-day period may easily be masked by a yearly average.

227 A very interesting comment is found on page 1-364 as follows: "The primary impact on air quality attributable to the development of phosphate resources in southeastern Idaho would be from the growth of existing plants." In spite of this statement and the claim that existing plants will equal or exceed standards on some parameters the recommendation is made on 1-528 that "In view of the existing and projected quality of the environment in the Soda Springs area .... consideration should be given to relocation of three proposed plant-sites in the Diamond Creek, Dry Valley, and China Hat area to the Soda Springs, Conda area", and "....locating the three plantsites on a dispersed basis in the Conda or Soda Springs area, where plants already exist, would preclude such impacts on the presently undeveloped environment and place them in areas already committed to such development."

227. The statement is not a recommendation; it is an alternative, and is so stated.

228 One would question if the author of this section was aware of the stated 209 ppm F on grass, the interaction of plumes from plants over 4 miles apart, and other air quality problems so consistently repeated previously to come up with such statements as those above. If the primary impact would be from existing plants

228. The location of plants refered to here are beneficiating plants which produce no fluorine emissions and can be held below limits set by the State air quality standards.

certainly no problem would be experienced from locating the new plants in the area requested. It is very interesting that locating plants in the area
228 requested by the companies involved "would have a high overall impact on the local environment" in that area but that it would be perfectly all right to concentrate six plants near the Soda Springs, Conda area.

ATTACHMENT 1

JUL 10 1976

CECIL D. ANDRUS, Governor
COMMISSION
PETE THOMPSON, Sandpoint
[illegible]
MYRON ROBERTSON, Sun Valley
ANDY ANDERSON, Pocatello

IDAHO FISH AND GAME DEPARTMENT

June 7, 1976

JOSEPH C. GREENLEY
Director
POST OFFICE BOX 25
600 SOUTH WALLER STREET
BOISE, IDAHO 83707

Wynne Blake, Lewiston
Will Godfrey, Boise

CC
G L Atwood
G A Aland
& return

Mr. D. W. Haines
Monsanto Industrial Chemicals Co.
P. O. Box 816
Soda Springs, ID 83276

Dear Mr. Haines:

287

Thank you for your letter of May 21.

I know that you people have cooperated with us, particularly on that deer migration problem, and I want you to know that I appreciate it very much.

Attached is information on populations of deer, elk and moose in Unit 76 that you requested.

I will be very happy to visit with you when I am in your area the next time.

Sincerely,

DEPARTMENT OF FISH AND GAME

Joseph C. Greenley
Director

JCG:ls
encl.

Unit 7G Big Game Population Statistics

Year	Deer		Elk		Moose	
	Preseason Population	Harvest	Preseason Population	Harvest	Preseason Population	Harvest
1954	12,000					
1955	12,000		1,200	400		
1956	12,000		1,000	200		
1957	12,000		750	240		
1958	12,500		550	20		
1959	13,000	2,686	625	20	125	5
1960	13,000	3,466	715	20	125	2
1961	13,000	3,171	800	20	125	2
1962	13,000	3,105	900	20	125	3
1963	13,000	2,937	1,000	60	130	7
1964	13,000	2,577	1,075	60	130	2
1965	13,000	2,749	1,150	91	130	3
1966	13,000	2,440	1,175	165	130	6
1967	13,000	3,326	1,200	182	135	2
1968	13,000	4,380	1,200	225	135	4
1969	12,000	4,223	1,150	220	135	9
1970	12,000	6,017	1,000	142	135	8
1971	8,700	2,910	900	164	140	7
1972	6,000	1,228	800	168	140	11
1973	6,200	1,457	700	153	145	9
1974	6,500	1,713	650	115	145	13
1975	6,500	1,560	600	118	150	22

J. R. SIMPLOT COMPANY / P.O. BOX 912 / POCATELLO, IDAHO 83201 / (208) 232-6620

MINERALS & CHEMICAL DIVISION

September 23, 1976

Director
U. S. Geological Survey
108 National Center
Reston, VA 22092

Dear Sir:

My statement concerning the air quality aspects of the Draft Environmental Impact Statement: Development of Phosphate Resources in Eastern Idaho is attached. I appreciate the opportunity of submitting these comments.

Sincerely,

J. L. Smith
Manager - Planning & Development

cl

cc: Interagency Task Force Director
Bannock Motor Inn
Pocatello, Idaho 83201

STATEMENT BY J. L. SMITH ON THE ORAFT ENVIRONMENTAL IMPACT STATEMENT ON THE DEVELOPMENT OF PHOSPHATE RESOURCES IN SOUTHEASTERN IOAHO - SEPTEMBER 23, 1976

- -

MY NAME IS JACK L. SMITH. I AM MANAGER OF PLANNING & DEVELOPMENT FOR THE J. R. SIMPLOT COMPANY'S MINERALS & CHEMICAL OIVISION, P. O. BOX 912, POCATELLO, IOAHO. THE FOLLOWING REMARKS CONCERN THE AIR QUALITY ASPECTS OF THE ORAFT ENVIRONMENTAL IMPACT STATEMENT. THE ORAFT STATEMENT CONTAINS SEVERAL TECHNICAL ERRORS ANO INCORRECT ASSUMPTIONS CONCERNING THE J. R. SIMPLOT COMPANY'S FACILITIES AND THE INDUSTRY. THE FOLLOWING COMMENTS CONCERN ONLY THOSE DEALING WITH AIR POLLUTION.

THE TASK FORCE ANO ITS CONTRACTOR, NORTH AMERICAN WEATHER CONSULTANTS, MAOE THE FOLLOWING ASSUMPTIONS WHICH I WILL OEAL WITH IN THE SAME SEQUENCE IN WHICH THEY ARE STATEO.

FIRST, THAT THE J. R. SIMPLOT COMPANY'S POCATELLO PLANT WILL OOUBLE IN PRODUCTION BEFORE 1985.

SECOMO, THAT FUTURE EMISSIONS TO THE ATMOSPHERE WILL BE IN OIRECT PROPORTION TO THE PRODUCTION TONNAGE WITH NO ALLOWANCE FOR IMPROVEO EMISSION CONTROL TECHNOLOGY.

THIRO, THAT 90% OR MORE OF THE FLUORIDE EMISSIONS FROM THE SIMPLOT FERTILIZER PLANT WOULD OCCUR AT THE GYPSUM SETTLING AREA.

FOURTH, THAT ROCK PROCESSING PLANTS, SUCH AS THOSE WHICH BENEFICIATE ANO DRY OR CALCINE PHOSPHATE ROCK ARE CAPABLE OF SIGNIFICANT EMISSIONS OF SULFUR OIOXIDE ANO FLUORIOES.

CONCERNING THE FIRST TASK FORCE ASSUMPTION: THE GREATEST INCREASE IN PHOSPHATE PRODUCTION AT THE POCATELLO PLANT, WHICH WE CAN NOW ENVISION, IS ABOUT 40% OVER THE AMOUNT WHICH WE PRODUCED IN 1975. THIS INCREASE MAY BE ACCOMPLISHED WITH RESPECT TO CAPACITY BEFORE 1980. ACTUAL PRODUCTION, HOWEVER CAN, OVER THE LONG RUN, BE NO GREATER THAN SALES. IT MAY VERY WELL TAKE UNTIL 1985 FOR THIS CAPACITY TO BE EFFECTIVELY USED, AS THE GROWTH RATE OF THE PRIME MARKETING AREA FOR OUR PRODUCTS HAS BEEN ONLY ABOUT 3.8% PER YEAR FOR THE PAST 10 YEARS. (PLEASE REFER TO FIGURE I, WHICH PORTRAYS THIS GROWTH.)

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THE ASSUMPTION THAT EMISSIONS CAN ONLY CHANGE IN PROPORTION TO PRODUCTION WAS NO DOUBT CONVENIENT FOR THE CONTRACTOR CHARGED WITH CONDUCTING THIS STUDY: HOWEVER, IT GREATLY DISTORTS THE PICTURE OF WHAT IS HAPPENING OVER TIME. THIS ASSUMPTION, COUPLED WITH THE PREVIOUS ASSUMPTION THAT OUR PLANT CAPACITY WOULD DOUBLE, LED NORTH AMERICAN WEATHER CONSULTANTS AND THE TASK FORCE TO CONCLUDE THAT BY 1985 OUR SULFUR DIOXIDE EMISSIONS WOULD DOUBLE AND THAT WE WOULD THEREBY VIOLATE THE AMBIENT AIR QUALITY STANDARDS FOR SULFUR DIOXIDE. NOT ONLY HAVE WE JUST COMPLETED THE LARGEST SINGLE AIR POLLUTION CONTROL PROJECT IN OUR COMPANY'S HISTORY FOR THE PURPOSE OF REDUCING SULFUR DIOXIDE EMISSIONS TO COMPLY WITH THE AMBIENT AIR QUALITY STANDARDS, IT WOULD BE MANDATORY FOR ANY NEW SULFURIC ACID PLANT TO MEET A VERY STRINGENT FEDERAL NEW SOURCE PERFORMANCE STANDARD FOR SULFUR DIOXIDE. THE NOTION THAT OUR SULFUR DIOXIDE EMISSIONS COULD INCREASE SIGNIFICANTLY, MUCH LESS THAT THEY COULD DOUBLE OVER THE NEXT NINE YEARS BECOMES INCREDIBLE IN THE FACE OF THESE REQUIREMENTS.

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THE ASSUMPTION BY THE CONTRACTOR, NORTH AMERICAN WEATHER CONSULTANTS, CONCERNING THE EMISSION OF FLUORIDES FROM THE GYPSUM STORAGE AREA IS ANOTHER CONVENIENCE WHICH LEADS TO SERIOUSLY ERRONEOUS CONCLUSIONS. AT PAGE 2-2 OF THE NAWC REPORT, THE STATEMENT IS MADE THAT "VOLATILE FLUORIDES VAPORIZING FROM GYPSUM SETTLING PONDS PROVIDE A SOURCE WHICH, IN THIS REPORT, WAS CALCULATED TO BE NINE TIMES THAT OF FLUORIDES EMITTED FROM

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1. This has been considered in the development of a more probable level of mining which is also discussed in the final EIS.

2. The following is quoted from the first paragraph on page 2-1 of Reference 19 (North American Weather Consultants, 1975):

"The results computed, and the conclusions and recommendations reached from these results, are based on existing emission data provided by the Environmental Sciences Division of the Idaho Department of Health and Welfare, and the production tonnage for current and future phosphate processing plants provided by the Interagency Task Force (IATF). Linking production to emissions data, and using this index for assessing future emissions from current and future processing plants was also necessary. No attempt was made to modify any results due to prospective increases in efficiency of any pollution abatement methods."

The figures provided for Simplot, Pocatello, were for production tonnage to double. Since emission rate is a linear function of ground-level concentration, revised production figures can be directly applied to previously computed values.

Records provided by the State of Idaho, Department of Health and Welfare, Air Quality, on November 4, 1976, show that sampling site #71, Pocatello Sewer Plant, had values reported in excess of the 3-hr standard of 0.50 ppm and 24-hr standard of 0.14 ppm during May, July, October, November, and December 1975.

3. The reference was extracted from the "Final Environmental Impact statement. Phosphate leasing on the Osceola National Forest, Florida. Eastern States Office, Bureau of Land Management, Dept. of the Interior, 1974." For the sake of completeness, the exact text of pg III16, 17 of the above reference is quoted:

("In the manufacture of wet-process phosphoric acid, waste liquors and slurries are produced that contain gypsum, sodium and potassium fluorosilicates, hydrofluoric acid and fluorsilicic acids.... The concentrations of hydrofluoric and fluorosilicic acid in the ponds gradually increase when the waters are recirculated into the manufacturing plants for reuse."

THE STACKS OF THE FERTILIZER PLANTS. IT IS OUR CONTENTION THAT GYPSUM DISPOSAL AND COOLING SYSTEMS ARE NOT SOURCES OF LARGE FLUORIDE EMISSIONS. AS PROOF OF THAT CONTENTION, WE OFFER THE FOLLOWING:

THE NAWC STATEMENT QUOTED IN THE PRECEDING PARAGRAPH IS BASED ON A PREVIOUS PUBLICATION. HOWEVER, THAT PUBLICATION IS APPARENTLY NOT CORRECTLY CITED AND IT, IN TURN, REFERRED TO A PUBLICATION, THEN IN PRESS (1971) WHICH WAS NEVER PUBLISHED.

TO BE SPECIFIC, AS JUSTIFICATION FOR THE USE OF A NINE-TO-ONE FACTOR, NAWC CITED ON PAGE 4-2 OF THEIR REPORT THE NATIONAL RESEARCH COUNCIL-NATIONAL ACADEMY OF SCIENCES (NRC-NAS) 1971 STUDY, BIOLOGIC EFFECTS OF ATMOSPHERIC POLLUTANTS, FLUORIDES, AS STATING:

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> "VOLATILE FLUORIDES VAPORIZING FROM THE PONDS ARE NOT CONTROLLED AND MAY CONSTITUTE 90 PERCENT OR MORE OF THE TOTAL FLUORIDE EMISSIONS TO THE ATMOSPHERE FROM THE INDUSTRY."

THIS STATEMENT WAS INCORRECTLY QUOTED IF THE QUOTE CAME FROM PAGE 10 OF THE NRC-NAS REPORT. ON PAGE 10, IT WAS STATED:

> "VOLATILE FLUORIDES VAPORIZING FROM THE PONDS ARE NOT CONTROLLED AND MAY CONSTITUTE 90% OR MORE OF THE TOTAL FLUORIDE EMISSIONS TO THE ATMOSPHERE."

THE NRC-NAS STUDY REFERRED TO AN UNPUBLISHED U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, PUBLIC HEALTH SERVICE (USDHEW), ENVIRONMENT HEALTH SERVICE 1970

REPORT, CONTROL TECHNIQUES FOR FLUORIDE EMISSIONS, AS THE BASIS FOR THE STATEMENT IN QUESTION. TABLE 10-1, PAGE 10-2, OF THE USDHEW REPORT INDICATES THAT THE PERTINENT RELATIONSHIP USED TO DEVELOP THE 90 PERCENT OR MORE VALUE IS A FUNCTION OF THE ESTIMATED GUPSUM SETTLING POND FLUORIDE EMISSIONS AND THE ESTIMATED FLUORIDE EMISSIONS FROM THE PHOSPHORIC ACID (WET PROCESS) STACKS. THEREFORE, IN ORDER TO ESTIMATE THE GYPSUM SETTLING POND FLUORIDE EMISSIONS, ONE WOULD APPLY A FACTOR OF APPROXIMATELY 11 TO THE PHOSPHORIC ACID PLANT STACK EMISSIONS BUT NOT TO THE TOTAL STACK FLUORIDE EMISSIONS FROM A PHOSPHATE FERTILIZER COMPLEX. SEE THE ATTACHED SHEET FROM THE NRC-NAS STUDY FOR THE EMISSION FACTORS.

TO REITERATE, THE USDHEW REPORT, NEVER PUBLISHED, CONTAINED FIGURES (TABLE 10-1, ITEM REFERENCE SECTION 4.3), WHICH COULD BE CONSTRUED TO GIVE AN 11:1 RELATIONSHIP BETWEEN POND EMISSIONS AND PHOSPHORIC ACID PLANT EMISSIONS OF FLUORIDES. OUR EXAMINATION OF A DRAFT OBTAINED FROM EPA REVEALS NO SUCH RELATIONSHIP CONCERNING OPERATIONS OTHER THAN PHOSPHORIC ACID, WHICH IN SIMPLOT'S CASE, IS A MINOR EMITTER.

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293

IN MISQUOTING AND MISUSING THE REFERENCE MATERIAL, NAWC HAS OVERESTIMATED THE GYPSUM SETTLING POND FLUORIDE EMISSION FROM SIMPLOT BY A FACTOR OF OVER 40, AS SHOWN BELOW:

ESTIMATES OF FLUORIDE EMISSIONS FROM GYPSUM SETTLING AREAS AT THE J. R. SIMPLOT COMPANY FERTILIZER COMPLEX NEAR POCATELLO, IDAHO

NORTH AMERICAN WEATHER CONSULTANTS PROCEDURE:

A. NAWC reported Fluoride Stack Emissions Total for Complex	3 g/s	104 tons/year
B. Estimated Gypsum Pond Fluoride Emissions = A x 9	27 g/s	981 tons/year

PROCEDURE CONSISTENT WITH TABLE 10-1, USDHEW REPORT:

A. Reported Fluoride Emissions
1975 Phosphoric Acid Plants 0.056 g/s 2 tons/year

B. Estimated Fluoride Emissions
From Gypsum Ponds = A x 11 0.62 g/s 18 tons/year

OVERESTIMATION FACTOR:

$$\frac{\text{NAWC Emission Estimate}}{\text{USDHEW Method Estimate}} \qquad \frac{27}{0.62} = 44$$

SINCE OUR PHOSPHORIC ACID PLANTS DO NOT EMIT 3 g/s (104 TONS/YEAR) OF FLUORIDE, IT APPEARS THAT NAWC HAS USED AN ESTIMATE OF THE FLUORIDES EMITTED FROM THE ENTIRE PLANT COMPLEX.

PROBABLY THE MOST DRAMATIC EVIDENCE AVAILABLE THAT THE INDUSTRY'S PONDS ARE NOT MAJOR CONTRIBUTORS OF FLUORIDE EMISSIONS IS GIVEN IN THE ATTACHED STUDY PERFORMED BY MR. GORDON F. PALM, OF LAKELAND, FLORIDA (A LONG-TIME CONSULTANT TO THE PHOSPHATE INDUSTRY). MR. PALM'S STUDY, APPENDED TO THIS STATEMENT, IS TITLED - CENTRAL FLORIDA PASTURE GRASS FLUORIDE LEVELS. THE PRINCIPAL CONCLUSION OF MR. PALM'S REPORT IS THAT THE PONDS IN A PHOSPHATE FERTILIZER COMPLEX ARE NOT THE DOMINANT SOURCE OF FLUORIDE EMISSIONS THAT NAWC HAVE ASSUMED THEM TO BE. DURING A PERIOD FROM 1964 TO 1975, THE FLORIDA PHOSPHATE INDUSTRY EXPERIENCED THE LARGEST GROWTH IN ITS HISTORY: YET, THE ACREAGE OF PASTURE GRASS CONTAINING ABOVE 45 PPM OF FLUORIDE DECREASED BY ABOUT 90%. IN 1962, THE STATE OF FLORIDA REVISED ITS MAXIMUM ALLOWABLE FORAGE FLUORIDE CONTENT FROM 40 TO 45 PPM F. THIS DOES NOT SUBSTANTIALLY CHANGE THE AREA RELATIONSHIP SHOWN, AS MOST MEASURED VALUES OVER 40 PPM ALSO EXCEED 45 PPM, ACCORDING TO MR. PALM. THIS REDUCTION IN AREA COULD NOT HAVE OCCURRED IF 90% OR MORE OF TOTAL FLUORIDE EMISSIONS ORIGINATED IN SETTLING OR COOLING PONDS. ALL RAW DATA IN MR. PALM'S REPORT WERE OBTAINED FROM PUBLIC SOURCES.

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294

AT PAGE 1-467 OF THE DRAFT STATEMENT, COMMENTS ARE MADE CONCERNING THE IMPACTS OF EMISSIONS OF FLUORIDES AND SULFUR DIOXIDE FROM ROCK PROCESSING PLANTS. ALSO, AT PAGE 1-524, "EVOLUTION OF FLUORIDE AND OTHER GASES" IS MENTIONED IN CONNECTION WITH ROCK CALCINING FOR FERTILIZER PLANT USE. I WOULD POINT OUT THAT ALL OF THE PRESENTLY PROPOSED ROCK PROCESSING PLANTS ARE ONLY FOR BENEFICIATION AND/OR CALCINATION OF PHOSPHATE ROCK. I WOULD FURTHER POINT OUT THAT AT A MEETING OF THE NATIONAL AIR POLLUTION CONTROL TECHNIQUES ADVISORY COMMITTEE IN WASHINGTON, D.C., ON APRIL 29TH OF THIS YEAR, MR. LEE BECK, A PRINCIPAL INVESTIGATOR FOR THE ENVIRONMENTAL PROTECTION AGENCY, STATED THAT THE EPA STAFF WERE NOT RECOMMENDING ANY STANDARDS FOR THE CONTROL OF EMISSIONS OF FLUORIDES OR SULFUR DIOXIDE FROM PHOSPHATE ROCK DRYERS OR CALCINERS BECAUSE THESE OPERATIONS DID NOT PRODUCE SIGNIFICANT EMISSIONS OF THESE POLLUTANTS. IN THIS RESPECT, I WOULD STRESS THAT THE EPA-PROPOSED STANDARDS FOR PARTICULATE MATTER FROM NEW PHOSPHATE ROCK DRYERS AND CALCINERS ARE EXTREMELY STRINGENT AND THAT IMPACTS FROM THESE PLANTS, IF BUILT, WOULD BE MUCH SMALLER THAN FROM OLDER PLANTS WHICH WERE BUILT WHEN MODERN EMISSION CONTROL TECHNOLOGY WAS NOT AVAIABLE.

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ON PAGE 1-391 OF THE DRAFT STATEMENT, IT IS STATED THAT FLUORIDE EMISSIONS WILL LIKELY INCREASE UNLESS STRINGENT CONTROL MEASURES ARE EFFECTIVELY ENFORCED AND THAT FURTHER CASES OF FLUOROSIS CAN BE EXPECTED. I WOULD POINT OUT THAT STRINGENT CONTROL MEASURES ARE NOW BEING APPLIED AT OUR POCATELLO PLANT, THAT TOTAL FLUORIDE EMISSIONS ARE GOING DOWN IN QUANTITY RATHER THAN UP, AND THAT A MORE LOGICAL CONCLUSION WOULD BE THAT THE CHANCES OF FLUOROSIS WILL BE DIMINISHED.

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I WOULD ALSO CALL TO YOUR ATTENTION THE FACT THAT PARTICULATE MEASUREMENTS AT THE STATE'S MONITOR AT THE POCATELLO SEWAGE PLANT WERE SHOWING A STRONG DOWNWARD TREND, UNTIL ABOUT THE TIME THAT CONSTRUCTION WAS BEGUN ON THE SECONDARY SEWAGE TREATMENT SYSTEM IN 1974. IN THE ABSENCE OF SUCH DUST RAISING ACTIVITY, I FEEL QUITE SURE THAT THE DOWNWARD TREND WOULD STILL EXIST.

5

"Volatile fluorides vaporizing from the ponds are not controlled and may constitute 90 percent or more of the total fluoride emissions to the atmosphere" from the industry.[1]

The silicon tetrafluoride emitted to the atmosphere can react with the atmosphere moisture and be precipitated off site as fluorosilicic acid by:

$$3Si F_4 + 2H_2O \rightarrow SiO_2 + 2H_2SiF_6$$

The fluorosilicic acid thus deposited off site on vegetation and percolating into the soil with rainwater contaminates the foliar surface and soil water. This combination of air and soil-water pollution causes the concentration of fluorides in the leaf tissues of plants. This phenomenon has caused fluoride concentrations in plants and crops of citrus near Bartow, Florida, in native plants near Garrison, Montana, and ponderosa pine near Spokane, Washington. Of particular concern is the transfer of fluorides from plants to herbivores. This occurs in wildlife and livestock grazing on plants containing high levels of fluorides. Problems of fluorosis have occurred in cattle in Tennessee, Wisconsin and other areas. Fluorosis is a bone disease and is not transmitted to man through the food chain. However, plants which have high concentration of fluorides, and are eaten by man may cause fluorosis in humans.)"

[1] "Biologic Effects of Atmospheric Pollutants - Fluorides," National Academy of Sciences Committee on Biologic Effects of Atmospheric Pollutants, Division of Medical Sciences, National Research Council, 1970.

4. Unquestionably the total fluoride emissions from the Simplot Plant in Pocatello will decrease in quantity with the installation of more stringent control measures. This in turn should lead to diminished fluoride concentrations in forage with a concurrent decrease in the chances for fluorosis.

However, at present there are no fluoride emission regulations on the existing plants and thus it is conceivable that without stringent laws and enforcement, the total fluoride emissions could increase with production.

5. According to the Idaho Department of Health and Welfare, the levels subsequent to completion of the sewage plant have been at about the 1972 level. There has been no continuation of the downward trend experiences in the early 1970's.

I WANT TO CONCLUDE BY SAYING THAT, IN SPITE OF PROJECTIONS TO THE CONTRARY IN THE DRAFT IMPACT STATEMENT, AIR QUALITY AROUND THE SIMPLOT PLANT NEAR POCATELLO IS IMPROVING AND WILL CONTINUE TO IMPROVE. WE HOPE THAT THE FINAL DRAFT STATEMENT REFLECTS THE FACTS PRESENTED IN THIS STATEMENT.

June 25, 1976

Phosphate Task Force
Geological Survey
Bannock Hotel
105 South Arthur
Pocatello, Idaho 83201

Gentlemen:

Having testified at your recent hearing on phosphate in Pocatello concerning the possible socio-economic consequences which might be caused by the inhibition of phosphate production in southeastern Idaho, and having received from the J. R. Simplot Company the most recent figures which update those I presented orally in the testimony, I now wish to augment that testimony by the enclosed written statement. The new data reinforces the points I made at the meeting.

I thank the Task Force for the opportunity to present my comments.

Very truly yours,

DAMES & MOORE

Richard Chojnacki
Associate

RC/pc

Attachment

STATEMENT OF RICHARD CHOJNACKI

ONE OF THE POSSIBLE CONSEQUENCES OF FEDERAL ACTIONS WHICH MIGHT BE TAKEN FOLLOWING THESE HEARINGS IS A PHASE-OUT OF THE WESTERN PHOSPHATE INDUSTRY. THIS WOULD OCCUR IF NO NEW LEASES ARE APPROVED.

DURING 1975, DAMES & MOORE PREPARED AN ENVIRONMENTAL ANALYSIS REPORT INVOLVING THE OPERATIONS OF ONE OF THE PRESENT OPERATING COMPANIES, THE J. R. SIMPLOT COMPANY. WE THINK THAT THE SOCIO-ECONOMIC IMPACT WHICH WOULD RESULT FROM THE LOSS OF THIS OR ANY OF THE OPERATING COMPANIES SHOULD BE OF INTEREST IN THE DEVELOPMENT OF THE FINAL EIS. WE HAVE UPDATED THE SOCIO-ECONOMIC DATA WHICH WE DEVELOPED FOR THE SIMPLOT COMPANY LAST YEAR, WHICH I WILL NOW PRESENT.

No response required.

THE J. R. SIMPLOT COMPANY PLANT IS ONE OF THE LEADING EMPLOYERS IN THE POCATELLO AREA WITH 613 PERSONS ON THE PAYROLL AT THE PLANT; THIS NUMBER CONSTITUTES APPROXIMATELY 2.7 PERCENT OF THE 1974 AVERAGE ANNUAL EMPLOYED LABOR FORCE IN THE POCATELLO AREA WHICH INCLUDES BANNOCK COUNTY AND THE EASTERN PART OF POWER COUNTY (IDAHO DEPT. OF EMPLOYMENT, 1975). THESE JOBS WOULD BE LOST AS A RESULT OF PLANT SHUTDOWN. THE COMPANY EMPLOYS OVER 1,500 IN THE ENTIRE MINERALS & CHEMICAL DIVISION AT VARIOUS LOCATIONS IN IDAHO, AND IT ALSO EMPLOYS A FORCE OF 220 AT THE GAY MINE AND 210 AT THE CONDA MINE; THESE JOBS WOULD BE JEOPARDIZED BY A PLANT SHUTDOWN.

EMPLOYMENT IN A BASIC INDUSTRY DETERMINES EMPLOYMENT IN THE NON-BASIC INDUSTRIES SUCH AS CONSTRUCTION, TRADES AND SERVICES. THE RATIO OF BASIC TO NON-BASIC WORKERS WAS SHOWN TO BE ESTIMATED AT BETWEEN 1:1.65 and 1:1.96. THIS MEANS

THAT FOR EACH WORKER EMPLOYED IN A BASIC INDUSTRY SUCH AS THE J. R. SIMPLOT COMPANY FERTILIZER PLANT, 1.65 TO 1.96 LOCAL WORKERS ARE REQUIRED TO SUPPLY NEEDED GOODS AND SERVICES. THUS, IF 613 SIMPLOT EMPLOYERS WERE TO LOSE THEIR JOBS AS A RESULT OF PLANT SHUTDOWN, FROM 1,011 TO 1,201 ADDITIONAL LOCAL WORKERS MAY BECOME UNEMPLOYED. POTENTIALLY, A TOTAL OF FROM 1,624 TO 1,814 WORKERS IN THE LOCAL AREA MAY BE AFFECTED BY SHUTDOWN (613 FROM SIMPLOT PLUS FROM 1,011 TO 1,201 NON-BASIC WORKERS). THIS REPRESENTS FROM SEVEN TO EIGHT PERCENT OF THE TOTAL EMPLOYMENT IN THE POCATELLO AREA.

THE ANNUAL PAYROLL FOR THE ENTIRE J. R. SIMPLOT MINERALS AND CHEMICAL DIVISION IS APPROXIMATELY $18.7 MILLION, THAT FOR THE GAY AND CONDA MINES IS $5.5 MILLION, AND THE PAYROLL FOR THE POCATELLO FERTILIZER MANUFACTURING PLANT IS $8.6 MILLION. CONSIDERING ONLY THE POCATELLO PLANT, THE AVERAGE WAGE IS $10,389 FOR THE 613 EMPLOYEES. IF IT IS ASSUMED THAT SERVICE WORKERS EARN ONE-HALF THAT WAGE OR $5,194, IT IS POSSIBLE TO CALCULATE THE APPROXIMATE MONETARY LOSS TO THE SERVICE INDUSTRY CAUSED BY PLANT SHUTDOWN. USING BASIC TO NON-BASIC RATIOS OF 1:1.65 AND 1:1.96, THE TOTAL INCOME WHICH WOULD BE LOST TO THE SERVICE INDUSTRY WOULD BE APPROXIMATELY $5.5 TO $6.53 MILLION. THE TOTAL LOSS TO ALL SIMPLOT EMPLOYEES AND THE SERVICE WORKERS SUPPORTING THEM WOULD BE BETWEEN $12.17 AND $13.2 MILLION.

PLANT SHUTDOWN WOULD HAVE A SERIOUS EFFECT UPON SUPPLIERS OF GOODS AND SERVICES, THE PRINCIPAL ONES BEING RAILROADS, TRUCKING COMPANIES, UTILITY COMPANIES, THE PETROLEUM INDUSTRY, INDUSTRIAL EQUIPMENT SUPPLIERS, STEEL FABRICATORS, ELECTRICAL EQUIPMENT SUPPLIERS, CONSTRUCTION COMPANIES AND MAINTENANCE COMPANIES.

DURING 1975 RAIL AND TRUCK FREIGHT PAYMENTS FOR THE SIMPLOT PLANT WERE OVER $9.4 MILLION FOR THE SHIPMENT OF RAW MATERIALS AND FINISHED PRODUCTS. PAYMENT FOR ELECTRIC POWER WAS $1.6 MILLION AND PAYMENT FOR NATURAL GAS WAS $5.8 MILLION. AS MUCH OF THE REQUIRED GOODS AND SERVICES AS POSSIBLE IS OBTAINED FROM THE LOCAL AREA, WITH OVER $10 MILLION SPENT IN THE LOCAL AREA ANNUALLY.

DURING 1975, THE J. R. SIMPLOT COMPANY PAID A TOTAL OF $255,000 IN PROPERTY TAXES TO POWER COUNTY. THIS AMOUNT WAS 18.3 PERCENT OF THE TOTAL PAID BY INDUSTRIAL CONCERNS (INCLUDING UTILITIES) AND WAS 9.7 PERCENT OF THE TOTAL REAL PROPERTY TAXES OF $1,989,690 ASSESSED IN POWER COUNTY (POWER COUNTY TREASURER, PERSONAL COMMUNICATION).





PICKENS

Electric, Plumbing and Heating

4866 Yellowstone - P. O. Box 5338
Pocatello, Idaho 83201
Phone 237-3430

Lusaire



June 3, 1976

Mr. William J.Schneider
Interagency Task Force
U.S. Geological Survey
P.O.Box 230
Pocatello,Idaho 83201

Dear Sir:

Having been a Sub-Contractor in Southern Idaho for nearly five years, and having been affiliated with J.R.Simplot Co., doing electrical, plumbing and mechanical work, both in service and supply of materials, I feel it is highly imperative that J.R.Simplot Co. and its affiliates be allowed to mine our Federal Phosphate resources.

Having grossed $131,306.93 from the mining industry which represents 13,130.69 man hours at an average wage of $10.00 per hour or 6.56 men for 1 year, which amounts to sustaining 25 persons for one year.Therefore I feel that to restrict or abolish future mining in the local mentioned would have a devastating effect on the economy.

Yours sincerely

Kenneth J. Pickens,owner

KJP/am

No response required.

Allied Steel Erectors, Inc.
SUBSIDIARY GATE CITY STEEL CORPORATION

BOX 4823, POCATELLO, IDAHO 83201
PHONE (208) 232-2345
TWX 910-979-5961

June 7, 1976

U. S. Department of the Interior - Geological Survey
Interagency Task Force
Development of Phosphate Resources
In Southeastern Idaho
P.O. Box 236
Pocatello, Idaho 83201

Gentlemen:

We as a small business involved in Steel Erection and Specializing in Plant Maintenance of Phosphate production feel that any imposed curtailment of present or future Phosphate activities would seriously damage our operation.

No response required.

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Of our total sales, the Phosphate Industries contributed 80% of them with last five years average of over $700,000.00, per year. This represents the employment of 30 to 35 on a permanent basis and without the Phos business this would reduce our permanent work force by 80%.

Gate City Steel, our parent Corporation, doing business as a Steel Service Center and Pre-process fabrication would be equally affected by any changes within the Phosphate Industry. Of their total sales, 30% is sold directly to the Phosphate business and another 40% is sold indirectly. Any changes within the Industry would mean an immediate 50% reduction of their work force and create an economic loss within Southeastern Idaho.

Neither of our operations or personnel are troubled by Air Polution, if any, coming from these plants.

Yours Truly

ALLIED STEEL ERECTORS, INC./AND
GATE CITY STEEL CORPORATION

Roger W. Kerr

RWK/ap

P. O. BOX 2066

Pocatello Supply, Inc.

WHOLESALE DISTRIBUTORS OF INDUSTRIAL SUPPLIES & EQUIPMENT

3233 POLE LINE ROAD PHONE 237-2222 POCATELLO, IDAHO 83201

June 4, 1976

Interagency Task Force
Box 236
Pocatello, Idaho 83201

Gentlemen:

We submit the following for your consideration in studying the impact of restricting the mining of phosphate shale rock.

Pocatello Supply, Inc. is an industrial supply distributor. We have been in business for twenty five years, cover southeastern Idaho and northern Utah and employ fifteen people.

Not only do we do a considerable amount of business with the companies directly engaged in mining and processing phospbate, but we also furnish supplies, tools, etc. to quite a few businesses who, in turn, do work for the mining and processing companies.

It is therefore, impossible for us to accurately determine the impact that a curtailment of mining of phosphate shale would have on Pocatello Supply, Inc., but it would be a serious blow. We doubt that we would be able to operate with any profit and feel certain that we could not experience any growth.

We respectfully urge you to consider the above in any considerations and decisions that you make regarding the mining of phosphate shale rock.

Very truly yours,

POCATELLO SUPPLY, INC.

LaVell B. Winn
President and General Manager

LBW:ma

No Response required.

303

NORMAN SUPPLY

RICHARD T. NORMAN
President

Phone (208) 233-4023 ● P. O. Box 4638 ● 756 South 1st Ave.
POCATELLO, IDAHO 83201

June 7, 1976

Mr. William Schneider
U. S. Geological Service
P.O. Box 236
Pocatello, Idaho 83201

Subject: Enviromental Impact Hearing
Phosphate Mining
Southeastern Idaho

Gentlemen:

304

We are a small piping jobber serving the southeastern portion of Idaho. We are entering our fifth year of business and now employ thirteen people.

Norman Supply is concerned with the continuation and expansion of the phosphate industry in this area. In examing our sales figures, we find that in 1974 and 1975 17% of our business came directly from the four major phosphate processing companies in this area. In addition, we estimate that another 18 to 20% of business can be attributed to contractors and related business that either serve or depend on phosphate mining and processing.

We feel that this area's economic good health depends a great deal on the phosphate industry and strongly urge that your committee consider and recommend an orderly planned continuation and expansion of the phosphate mining industry in Southeastern Idaho.

No response required.

Yours very truly,

Richard T. Norman
NORMAN SUPPLY

RTN:gaf

DISTRIBUTORS
PIPE – VALVES – FITTINGS – PLUMBING – HEATING – INDUSTRIAL

C. W. MULHALL
REAL ESTATE
SHANE BUILDING
IDAHO FALLS, IDAHO 83401

6-8-76

INTERAGENCY TASK FORCE
DEVELOPMENT OF PHOSPHATE RESOURCES
IN SOUTHEASTERN IDAHO
P.O. BOX 230
POCATELLO, IDAHO, 83201

GENTLEMEN:

I WOULD LIKE TO OFFER MY PROTEST TO THE PLANNED MINING OF PHOSPHATE IN SOUTHEAST IDAHO.

IDAHO IS STILL FORTUNATE IN BEING ONE OF THE FEW STATES WHICH HAS BEEN ABLE TO KEEP MUCH OF ITS NATURAL BEAUTY. THIS IS A PRICELESS HERITAGE WHICH IS FRAGILE AND EASILY DESTROYED, AND ONCE GONE, CAN NEVER BE RECOVERED.

THERE ARE ALWAYS GREEDY, SELFISH, MONEY-HUNGRY PROFITEERS WHO ARE READY AND EAGER TO EXPLOIT THE LAND WHICH BELONGS TO ALL OF US. WE OWE IT TO OUR SELVES AND TO THOSE WHO WILL FOLLOW US TO EXERT STRICT CONTROL, AND TO SAVE OUR STILL UNSPOILED BEAUTY AREAS IN IDAHO.

IN NEARLY EVERY STATE THE NATURAL BEAUTIES ARE DISFIGURED, OR RUINED FOR EVER, WITH POLLUTED AIR, FOUL WATER, UGLY SCARS ON THE LANDSCAPE, FORESTS CUT DOWN, FISH AND GAME A THING OF THE PAST. IF WE TAKE A FIRM STAND, THIS NEED NOT HAPPEN HERE.

SINCERELY,

C. W. MULHALL

No response required.

Idaho Building & Construction Trades Council

456 North Arthur, Box 1110
Pocatello, Idaho 83201
Phone: 232-4601

June 6, 1976

Executive Officer
Interagency Task Force
Box 236
Pocatello, ID 83201

Dear Sir:

The Idaho Building & Construction Trades Council would like to have the following statement made a matter of record at the public hearing concerning the environmental impact of the phosphate industry to be held at the Bannock Motor Inn, June 7, 1976.

Our position is such that we support the procurement of work in the area to provide jobs for the people we represent in the state of Idaho. The phosphate industry is certainly one of the main sources of employment for our people in this area.

We represent approximately 3,500 people who would be without employment if the phosphate industry were to cease operation. We, too, are concerned about the environment, but it is our belief that we can certainly conserve the environment and also progress in industry, vital to the employment in this area, with the technology and intelligence that the people in our state possess.

By working together, the people of this area can enjoy both well paying jobs and a fine place to raise their families.

Thank-you for your consideration of our position and for allowing us to state our views in this matter.

Very truly yours,

L. Ross Jensen

L. Ross Jensen, President
Idaho Building & Construction
Trades Council

LRJ:sgb

No response required.

306

STATEMENT: Submitted for inclusion in the Draft Environmental Impact Statement for the Development of Phosphate Resources.

PURPOSE: The purpose of this statement is to indicate the impact that the I.S.U. Geology Department has had, and can possibly have in the future, upon the phosphate mining industry in S.E. Idaho.

Present Cultural Environment

There are presently approximately 90 geologist, mining engineers and other geoscientists in S.E. Idaho. Most are members of the Society of Mining Engineers of A.I.M.E. and are employed in the phosphate industry. Around 19 of these persons are either former or presently are students at Idaho State University. J. R. Simplot Company employs 9 of these I.S.U. graduates. F.M.C. employs 10 I.S.U. graduates. This record establishes an important contribution that I.S.U. has made to the geology profession and mining industry of S.E. Idaho.

Impact, Cultural

It is anticipated that I.S.U. will make further contributions to the geologic community of S.E. Idaho. This input will consist of educational activities such as the offering of geology courses via Continuing Education, and providing qualified personel for companies or state agencies engaged in geological activities such as mining, mineral exploration, ground water studies, and other geologically or environmentally related activities. The continuance and expansion of mining activity will provide students for geology courses and employment opportunities for I.S.U. graduates. The contact of I.S.U. geology students with professionals engaged in the mining industry can not help but be highly beneficial for both.

Submitted by: Charles W. Blount
Chairman, Department of Geology

Dated: June 7, 1976

WESTERN IDAHO PRODUCTION CREDIT ASSOCIATION

216 SOUTH 5TH STREET - TEL. 459-4631

BOX 759, CALDWELL IDAHO 83605

June 8, 1976

Executive Officer
Interagency Taskforce
U. S. Geological Survey
P. O. Box 236
Pocatello, Idaho 83201

Gentlemen:

I'm writing regarding the current public hearings on environmental impact statements on proposed mining of phosphate deposits in southeastern Idaho. Because of the prime importance of agricultural in Idaho's overall economy, and the benefits I believe would accrue to agriculture in general and Idaho agricultural in particular from increased phosphate mining in Idaho, I believe every possible effort should be made to increase Idaho's phosphate production. I would, of course, expect reasonable consideration be given to the protection and/or restoration of our environment.

No response required.

308

As manager of a Production Credit Association in Idaho providing nearly $100,000,000 annually to more than 1000 farmers and ranchers I see the importance of a strong agricultural and business economy. I do believe the agricultural and mineral resources of this state may be properly exploited and remain compatible with a desirable environment if the proper safegaurds are instituted. I hope, therefore the business economy will not be stifled by overly restrictive policy on development of these resources.

The opinions expressed herein are personal. I do not mean to imply that I speak for either the membership of Western Idaho Production Credit Association or the FCA system itself. Thank you very much for your consideration.

Yours truly,

A. D. Fisher
Manager

ADF/db

FIELD OFFICES

124 East Main
Weiser 83672
Phone 549-1921

175 North Second East
Mt. Home 83647
Phone 587-3611

1302 S. Washington Ave.
Emmett 83617
Phone 365-3527

13 East Cottonwood
Meridian 83642
Phone 888-1311



MULTIPLE-USE

SAWTELLE CHAPTER

OUTDOORS UNLIMITED

P. O. BOX 167
ST. ANTHONY, IDAHO 83445

June 3, 1976

Executive Officer
Interagency Task Force
Box 236
Pocatello, Idaho 83201

Re: Statement of Sawtelle Chapter, Outdoors Unlimited on The Draft Environmental Impact Statement on Development of Phosphate Resources in Southeastern Idaho

Dear Sir:

Sawtelle Chapter of Outdoors Unlimited is a multiple-use resource organization representing 60 members and 200 affiliate members in S.E. Idaho. Our membership contains representatives of organized sportsmen, wood products, grazing, outdoor recreation, minerals, agriculture, water resources and orgnized labor. The social, economic and recreational aspects of our lives are intimately associated with the natural resources of S.E. Idaho.

It is not our intent to duplicate in volume or detail the information assembled in the draft environmental impact statement. It is, however, our right and responsibility as citizens, taxpayers and environmentalists to comment on the social/economic aspects of the phosphate study. The results of this and similar studies will to a large extent determine our current and future way of life as individuals and as a nation.

We here today are representative products of a great nation, blessed with a beneficial form of government, abundant natural resources, and an ambitious public. We have reached a point of development where more people enjoy a higher standard of living than in any other nation. Basically we have reached a near "full stomach" philosophy as a nation. We no longer think of where it came from, how we got here, or where we are going. Rather, we as a nation are beginning to concern ourselves with the amenities of life that others earned for us.

This then is the reference point that should be drawn to start the phosphate development environmental impact study from. The draft statement as it exists fails to draw the full stomach reference point. Further, there is no definition of the social and economic needs of this nation or its citizens. The results of the study then are a repetitious, detailed, overlapping and non-defining set of assumptions that starts nowhere and concludes nothing.

Because no national social/economic goals, objectives and priorities have been established to guide our resource decisions on such questions as phosphate development, this study must develop a social/economic reference base before the truly secondary "environmental impact" question can reasonably be answered. As with so many environmental questions, we have the cart ahead of the horse. We have focused on details of a specific subject to the extent we have failed to grasp the total impact on our nation as a whole, its citizens and our future.

The horse is the average public, singularly and collectively. The public has basic needs of food, fiber, shelter, water, a job, an education, and a reasonable environment. This same public has the ability to work, produce and enjoy. The needs of this nation must be considered before restrictions are placed on activities that help assure a continued acceptable way of life.

The cart is that segment of the public whose primary concerns are with amenity values. Their platform is the good life. They are not aware of where it came from or how we can maintain it. They are articulate, affluent and self-centered. They are responsible for many of the current environmental laws and regulations; good ideas that are incompletely thought out. The result is a vast array of rules, regulations and requirements that so totally involve all levels of government in overlapping authorities that it is likely costs and confusion will reign supreme over common sense and progress. This is one of the problems with the draft environmental statement on phosphate mining.

Public opinion polls are poor barometers of public needs. They basically represent the short term desires of those who already have the better things of life.

Phosphate is a mineral that is a necessary component of all living matter. The draft statement indicates that normal development over the next 25 years will result in less than 25,000 additional people to be located in S.E. Idaho and less than 10,000 acres disturbed to one degree or another. Eighty-five percent of phosphates in the U.S. go to fertilizers and animal foods, 5% go to detergents and the remaining 10% to all other uses. Because of phosphates' close tie to human well being, we are most fortunate 1/4% of the world phosphate reserves are in the United States.

Sawtelle Chapter feels the phosphate fields should be developed in a prudent, economic manner. Air and water quality can be maintained to a degree that protects the health and welfare of Idaho citizens. Amenity values should be considered to a degree that is commensurate with the benefits obtained from phosphate extraction. Idaho is going to grow and experience environmental degradation with or without accelerated phosphate development. We are sure a better Idaho can be obtained through sensible use and management of all our natural resources.

311

The hard questions the draft environmental study team has avoided must be answered. Generally this is, What is the social/economic/environmental impact of non-development of the phosphate resource?

Specifically you must answer questions such as:

What life style do we choose to maintain in the future?

1 What position in world leadership does this nation wish to maintain?

Who will feed this nation or other nations? What will it cost?

How will we feed this nation in the future?

What will be this nation's source of basic wealth if we cannot develop and use our minerals, rivers, soils and forests?

1. Many of these questions involve National, State, and local policies which are beyond the scope of this EIS; some relate to and are addressed in Chapter IV, Impacts, and Chapter VIII, Alternatives, in the Regional Appraisal (Part I) to the extent possible where germane to the requirements of NEPA.

Who will pay the bills for the life style and services our public seems to demand?

What impact will public education and understanding of basic needs have on environmental evaluation?

What effects do emotion have on environmental evaluations?

What are the current and future actual public needs relating to phosphates and other natural resources?

How can amenity valuations be placed in true perspective with basic needs over the long term?

Agencies feel comfortable with maps, figures, details and assumptions. Until we face the greater questions of public needs, national goals and objectives and the future, the voluminous details are grossly out of place.

In summary, we must not forget our environment is a dynamic situation. The environment includes the home, the factory, the city, the field and the forest. It can be upgraded, it can be degraded, but it will not remain static. To think we can recapture the past or remain static is a fool's assumption. Natural resources with their environmental overtones can produce jobs, products, prosperity and esthetics. We cannot reap only the desirable products of our natural resources. We can logically and analytically determine what are our basic needs, what we must extract and use, what we can afford to save and enhance, and to what degree use is compatible with public health, safety, happiness and security. Because there are no simple solutions we recommend the pursuit of some intelligent choices; specifically the adoption of a positive multiple-use resource approach to the phosphate mining proposals. That is to:

Conserve not preserve,
Use not waste,
Respect not abuse,
Share not hoard.

There will be environmental impacts with S.E. Idaho phosphate development, many good, some bad. Let us be on with the program in a prudent and proper manner.

Sincerely,

Rem Kohrt

Rem Kohrt, Secretary
Sawtelle Chapter

RK:ikb

cc: Governor, State of Idaho
Idaho Congressional Delegation
Selected Idaho Legislators

INTERNATIONAL ENGINEERING COMPANY, INC.

SAN FRANCISCO PHOENIX DENVER BOISE

S. M. Barton, P.E.
B. W. Stoddard, P.E.
W. A. Higgins, P.E.

BOISE OFFICE
145 I Hartman Street
Boise, Idaho 83704
Phone: (208) 375-5232

June 17, 1976

Mr. David Schleicher
Interagency Task Force: Phosphate
U.S. Geological Survey
P. O. Box 236
Pocatello, Idaho 83201

Dear Mr. Schleicher:

We had been scheduled to present commentary on the draft environmental impact statement: Development of Phosphate Resources in Southeastern Idaho, at the June 14 public hearing in Boise. That hearing was postponed, but presumably will be opened in the near future. We wish to participate in that hearing, but uncertainties in accommodating future schedules may preclude our direct appearance.

We hereby request the opportunity to present our comments at the rescheduled public hearing and would appreciate being informed of its occurrence. In the event that we cannot be present, we are enclosing our statement on the draft E.I.S. for the hearing record. However, we will make every effort to personally address our comments to the public and hearing officials at the appropriate time.

Yours very truly,

S. M. Barton

SMB:JKD:bh

Enc: Statement on Draft E.I.S.

STATEMENT TO BE
PRESENTED AT PUBLIC HEARING
JUNE 14, 1976
BOISE, IDAHO

PERTAINING TO

DRAFT ENVIRONMENTAL STATEMENT

DEVELOPMENT OF PHOSPHATE RESOURCES IN SOUTHERN IDAHO

This statement is submitted into the Hearing Record by S. M. Barton and B. W. Stoddard, both registered professional engineers in the State of Idaho, residing in Boise, Idaho. We have been engaged in the practice of consulting engineering for over 30 years, specializing in mining, transportation, and power line location activities; including the preparation of Environmental Impact Statements. Our offices are at 1451 Hartman Street in Boise, Idaho.

315

The Task Force is to be complimented on producing very useful documentation of integrated phosphate development proposals and for undertaking the difficult effort of fairly assessing the potential impacts of these proposals. They have done a commendable job. However, we have noted several areas throughout the document which seem highly speculative and non-supportive in view of contemporary engineering practice. We specifically wish to address our comments, based on our professional experience, to Part 3 of the Draft Impact Statement, entitled "Transportation and Utility System".

1 In discussing the environmental impacts of the several road and railroad locations, there is abundant and misleading use

1. We disagree. Certain known impacts will occur; stating these impacts, however, does not predict calamity. Soils will be disturbed, stream channels will be altered, vegetation along routes will be removed, wildlife will be displaced, land will be removed from agriculture, and the aesthetics of the area will be impacted. We do not feel that there is any uncertainty of these impacts.

of the verb form "will". The usage implies that if these necessary transportation facilities are constructed, some form of calamity would inevitably follow. We submit that these assessments are not necessarily accurate and that the nature and magnitude of adverse impacts associated with transportation facilities can often be eliminated or reduced by appropriate engineering design. For example, appropriately designed retaining walls and landscape treatment of cut slopes and fill slopes along roadways can effectively enhance the aesthetic factors as well as minimize future maintenance problems. In fact, many impacts which are prematurely designated as adverse turn out to be impacts of a beneficial nature once the facility has been installed. By changing the definite "will" to some probabilistic form, such as "could", the true uncertainty of predicted impacts becomes more lucid.

1

316

There seems to be a negative tenor throughout the discussion of environmental impacts presumed to be associated with transportation routes. No where are the beneficial or positive impacts set forth. For example, in Part 3, we find no mention of the improved local tax base that often accrues from expansion of utility, rail and railroad systems. Nor is there an objective assessment of the value of the utility and transportation systems related to the national needs for production of phosphate products.

2

The section dealing with impacts on wildlife is, in our opinion, overstated and not supported in the real world. We submit that the intrusion of modern transportation corridors into

3

2. The Department of the Interior policy on environmental statement format focuses on an assessment of environmental considerations. An economic assessment of phosphate mining in southeastern Idaho will be considered, along with national and world needs for production of phosphate products and their relationship to production from this area in the decision making process.

3. We believe that impacts as stated will occur. Based on experience with transportation systems, not only in the phosphate area but in other areas as well, wildlife can be severely adversely affected. Right-of-ways usually require fencing to keep out domestic livestock and these in turn create obstacles to wildlife movements.

an area where only primitive facilities previously existed may lead to some readjustments among indigenous wildlife populations. However, our experience indicates that the magnitude of adverse impacts may not be as severe as stated in the Draft E.I.S. Along most of the roads and railroads we have had a part in designing over the past years, wildlife has not necessarily abandoned the area because of the presence of the road or railroad. It is true that habitat covered by the transport installation is lost to further wildlife use. But a linear facility seldom obliterates an entire habitat, leading to abandonment by wild species. And the mere presence of vehicular traffic, whether truck, auto, or railroad rolling stock, does not automatically conflict with the simultaneous presence of wildlife in the area. In fact, we have observed on many occasions that the new "edge" environments created by the transport system facility provide a more diverse opportunity for wildlife adaptation than existed previously. It is continuous urban expansion, and not necessarily the placement of transport corridors or scattered processing plants, that contribute to wildlife exodus.

The presumed blockage of wildlife migration routes by the physical presence of roads and railroads alluded to in the Draft E.I.S. has not been borne out in our experience. Roads and railroads by themselves seem to have little or no effect on mammal migrations but road kills can be significant. We cite two examples:

The value of roads and railroads in the phosphate area as providing "edge effect" is highly questionable. There is no information available concerning the type of edge that would be created or the wildlife species that would use it. There would certainly be no value for big game by any edge created and other than some lower rodent species, wildlife in general would not benefit.

The deer migration blockage along the Idaho-Utah state line near Snowville was caused by a combination of highway construction and right-of-way fencing. The special fences referred to were not designed to discourage migration but rather deflect deer from traveling further south where winter losses have been severe. The construction of the highway blocked deer from their normal migration route and caused the existing problem. If the wing fences proved successful in encouraging deer to resume their normal migration habits, underpasses and other structures could be considered to minimize traffic mortality.

The statement that migration routes are short-term, local events is completely erroneous. Migration routes are traditional and historical and alterations of these routes can result in major permanent population losses.

(1) During the past few years, wide coverage has been given to stories of traffic hazards created by wildlife migrations crossing Interstate Highway 80N on the Utah-Idaho border. Here, the existence of a highway has not deterred migration, but rather is resulting in the erection of special fences to discourage direct migration. It would be the fences, not the highway that may block migration routes.

(2) On State Highway 21, approximately 15 miles east of Boise at Lucky Peak Reservoir deer actively use the roadway in their migrations to and from winter range instead of being deterred by it. An estimated 34 percent of the entire Boise River deer migration even utilize a highway bridge over the Mores Creek arm of Lucky Peak Reservoir in this migration instead of other specially provided crossing sites.

3

Over the long-term, game migration patterns often change as a result of natural variations in food supply, herd composition, or other factors. Thus, the migration routes existing today in the Phosphate area of southeastern Idaho are probably not steady-state, preservable phenomena, but rather may be relatively short-term local events subject to environmental conditions beyond human control.

4 In the chapter entitled "Adverse Effects Than Cannot be Avoided", as well as in the section on Environmental Impacts, we note a

single unsupported statement that we believe needs clarification. This statement alleges that "fires will increase significantly along the proposed rail route and in areas made more accessible by new or improved roads" (cf. page 3-26 and 3-40). How these fires would come about is open to conjecture. Certainly in the past, coal and wood fired locomotives would occasionally eject burning embers which could ignite nearby grass and brush. Today, however, the use of diesel-electric power units has largely eliminated the problem. Combustion from vehicular traffic on area roads is also very infrequent -- fires in highway rights-of-way are of less significance than range fires of undetermined origin in remote areas. Also, the presence of a transportation facility aids in combating wildfires. Fires may result from carelessness of people (i.e. discarding lighted cigarettes from roadways). However due to the private ownership of the transportation routes in the phosphate areas this can be considerably reduced by enforcement of rules and regulations during fire season and by company-sponsored education.

4.

Chapter IV - "Mitigation Measures" neglects mention of the permit requirements of the U. S. Army Corps of Engineers under CFR Title 33, Chapter II, Part 209. This is recent legislation which requires Corps review of all construction involving river or reservoir encroachment, or the emplacement of any material into navigable streams or their tributaries. Under this enactment, all stream crossings would be designed and built according to modern engineering standards which protect waterways from disturbance to the extent practicable.

5.

4. We agree that modern diesel-electric locomotives have largely eliminated the fire hazard associated with coal and wood fired locomotives, but the fire hazard from "hot boxes" still exists.

There is still also the greater potential for wildfire due to increased numbers of people in the area. Many of the access roads proposed for improvement will not be privately owned by the mining companies, and will be used by the public. Also, roads constructed in conjunction with exploration operations will improve accessibility into some of the more remote areas.

5. Reference to the Corps of Engineers permit requirements have been added to the text

Flood protective requirements are also part of the permit review. Road and railroad design standards that have been voluntarily adhered to by professional engineers for several years are thus mandatory. Such standards would mitigate much of the adverse impacts alluded to in the Draft E.I.S.

5

The "Alternatives" section tacitly advocates use of slurry lines to avoid serious environmental impacts of other transportation modes. While we concur in the use of this form of material movement in selected locations, we have strong reservations about its widespread use. Slurry lines require the diversion of large quantities of water at the mine or plant. This could have significant environmental ramifications on ground and surface water supplies. At the lower terminus, this slurry water must be cleaned and then released into some type of environmentally compatible disposal system. Diversion from one drainage system into another could have serious consequences at both ends. While not an insurmountable problem, given our modern technology, slurry water use may be more costly in terms of dollars and long-term environmental damage than the roads and railroads it would replace.

6

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We would like to express our thanks for this opportunity to present our concerned comment on the Draft Environmental Impact Statement for the Development of Phosphate Resources in Southeastern Idaho. We hope that these comments will aid the Task Force in considering the beneficial, as well as the

6. The water used in forming a slurry is but the vehicle used in slurry transport. As with other modes of transport, the vehicle may be recycled to the mine with the only water required after the initial loading of the system being the replacement of that lost in separating the ore from the water at the delivery site. This would not be a great amount, as the ore, as mined, contains about 11 percent and, with reasonable separation efficiency, 20 percent moisture would be obtainable in the ore after separation.

In areas where there is adequate water obtainable and diversion of water from one drainage system to another is not a problem, a one-time use of the water might be considered. The discharge of waters used in slurry transport into the surface or ground waters of Idaho would, of course, have to meet State and Federal effluent specifications.

adverse, social, economic, and environmental effects of the proposed developments.

S. M. Barton

B. W. Stoddard

STUDENT UNION
IDAHO STATE UNIVERSITY
Pocatello, Idaho

July 21, 1976

Interagency Task Force
Development of Phosphate
In Southeastern Idaho
P. O. Box 230
Pocatello, Idaho 83201

Dear Sir:

I am deeply concerned about the proposed growth of Southeastern Idaho and its implications if all the planned developments of the phosphate mining industry are augmented.

I would like to ask the Secretary of the Interior to limit phosphate production to the current, or slightly increased, level in Eastern Idaho by granting approval of mine plans only as they are needed to maintain this level. Just because phosphate is there, doesn't mean it has to be taken out now!

Also, I would like to see denied all applications for prospecting in S. E. Idaho's phosphate area.

1 In addition, I would like to request that the Interior Department observe and obey existing State of Idaho laws relating to protection of water quality of stream channels.

The Secretary of Interior should be reminded that he has a duty to protect the environment, as well as to permit orderly and timely mineral development.

I make my living using the natural environment, too, just as miners do. However, when a natural area is defaced, its natural inhabitants such as deer, birds, elk, moose, etc., are displaced I must find a new area in which to work. Unfortunately,

1. The appropriate Federal and State laws applicable to water quality are listed in Part 1, Chapter IV. Lessees are required to comply with these laws. See p. 1-425 of the DES.

mining and a quality environment do not seem compatable. The Environmental Impact Statement clearly spells out what a negative effect phosphate mining will have on the region. Once mining gets a grip on that area it will be the end of enjoying a beautiful area by thousands of people. Is the proposed development really necessary at the present point in time? Do we, the people of the U. S., really need all that phosphate now?

Respectfully submitted,

H. S. Hilbert

H. S. Hilbert, Coordinator
ISU Outdoor Program

BAKER PRODUCTION CREDIT ASSOCIATION
ONTARIO BRANCH — 201 SW 2nd St. — Tel. 889-6671
Box T, Ontario, Oregon 97914

July 22, 1976

Interagency Task Force
Box 236
Pocatello, Idaho

Gentlemen:

I wish to make a statement on the Draft Environmental Impact Statement for the development of Phosphate Resources.

I urge that this task force favorably consider the continued and increased leasing of public lands to the phosphate mining interests. Idaho has been and should continue to be one of the major sources of phosphate to this area of the United States. Stopping or slowing down this industry would not only create problems for many people employed in the industry, but may also contribute to higher food costs since making phosphate from this area unavailable creates much higher fertilizer costs that will ultimately be passed on to the consumer. In the meantime the farmers, whose major costs include fertilizer will be in a tighter cost price squeeze if the phosphate is limited.

Singerely,

Kenneth D. Greeley
Branch Manager

KDG:cm

No response required.

Utah County Wildlife Federation

R.F.D.#1, Box 622
Payson, Utah 84651
July 23, 1976

Interagency Task Force
Development of Phosphate Resources
in Southeastern Idaho
P.O. Box 230
Pocatello, Idaho 83201

Dear Sirs:

Our organization would like to comment as follows upon the drsft Environemental Impact Statement entitled "Development of Phosphate Resources in Southeastern Idaho."

Although Utah County is located two to three hundred miles south of the southeastern Idaho phosphate resources, we are vitally interested in the effects future phosphate mining will continue to have upon the ecology and wildlife populations of the immediate and surrounding areas. Therefore, we urge you proceed rather cautiously in approving large scale development of this resource. Haste more often than not breeds waste and destruction. We cannot afford to lose any more wildlife habitat and population to open pit mining and other types of heavy development.

No response required.

Very Sincerely,

W R Phelps

W. R. Phelps, President
Utah County Wildlife Federation

Idaho State University

DEPARTMENT OF BIOLOGY
Pocatello, Idaho 83209

SUBJECT: Draft EIS on the development of Phosphate Resources in South-Eastern Idaho.

FROM: Dr. Charles H. Trost, Associate Professor of Biology

With respect to wildlife, and specifically birds, I feel that the draft EIS, volumes I and II are inadequate. In addition, I feel that the proposed action is in violation of existing Federal Laws, and therefore is illegal. Finally, the mitigation proposals expressed in both those volumes are not realistic, and in fact, do not address nor compensate for the proposed environmental degradation. 326

It is not possible to judge the effects of the proposed development without a complete and accurate list of the wildlife and their status in the area. Table 1-19 lists 49 species "selected" out of 272 species known to be in the area, and has no information on their nesting status. This arbitrary and capricious selection of species does not even list nineteen (19) species which are currently on the Audubon Society's Blue List - an "early warning list" of potentially troubled species analysis 1

1. In the analyses of impacts on avian populations, all 272 species were considered. This, of course, includes those on the Audubon Society's Blue List. The analyses indicated that only two species - the reintroduced whooping crane and the peregrine falcon would be impacted to a degree considered significant to discuss. Inasmuch as the purpose of an EIS is to determine significant impacts, voluminous listings were not made, and selected species considered representative of the area were listed.

(American Birds, 1975, Vol 29, No 6, p 1069 - 1072). The Blue List consists of "... those species which in all or in a significant part of their range, currently exhibit potentially dangerous, apparently non-cyclical population declines." Those species not listed are as follows:

1. Western Grebe
2. White Pelican
3. Double-crested Cormorant
4. American Bittern
5. White-faced Ibis
6. Black-crowned Night Heron
7. Canvasback
8. Sharp-shinned Hawk
9. Cooper's Hawk
10. Ferruginous Hawk
11. Osprey
12. Merlin
13. Barn Owl
14. Burrowing Owl
15. Short-eared Owl
16. Hairy Woodpecker
17. Mountain Bluebird
18. Yellow-breasted Chat
19. Grasshopper Sparrow

On this table (1-19) the Endangered Bald Eagle and Whooping Crane are not even mentioned. Also rare and significant in the area, but unlisted, are Great Gray Owls, Caspian Terns, Flammulated Owls, Common Loons,

Pinyon Jays and Scott's Orioles. Many of these species are aquatic and/or predacious. As such they are excellent environmental indicators of pollution because their diet is high on the trophic level where pesticides and other poisons can be expected to accumulate. The recent Teton Dam
1 disaster has released many toxic substances (DDT, PCB's, etc.) into the Snake River ecosystem. This has both direct and indirect implications about human health and safety in this environment. The value of these aquatic and/or predacious species has increased immeasurably since the flood and they certainly deserve at least some consideration in the EIS.

The EIS is proposing illegal action as defined by section 7 of the Endangered Species Act of 1973 (pl-421), which"requires that Federal actions do not jeopardize the continued existence, or result in the destruction or modification of such habitat of such species which determined . . . to be critical." The Bald Eagle, Peregrine Falcon, and Whooping Crane are Endangered, and following passages from EIS indicate a blatant violation of the Endangered Species Act:

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pl-380; " A traditional Bald Eagle aerie in Middle Sulphur Canyon... would be disrupted or destroyed."

2

pl-380; " Reduction in song and and insectiverous birds . . . would adversely affect Peregrines."

pl-381; "Existing suitable habitat for Whooping Cranes will become unsuitable once the proposed mining . . . ."

pl-469; "Nesting and brood rearing habitat for Sandhill Cranes will be affected in Diamond Creek, Slug Creek, Dry Valley, Rasmussen Valley, Enoch Valley, and Blackfoot River corridors.

The loss of habitat resulting from human disturbance to these birds cannot be avoided."

p1-470: " Mining and associated activities will have unavoidable impacts on Whooping Cranes and Peregrines."

p1-492: "The irreversable alteration or reduction of suitable habitat would impede the recovery and reestablishment of the Peregrine Falcon and Whooping Crane."

p3-28: " Three known Bald Eagle wintering areas and two possible wintering could be rendered unsuitable and abandoned."

p3-29 " Reducing habitat by construction of railroads and all-weather road systems may prevent the continued spread of Whooping Cranes. Human disturbances permitted by these corridors will cause some birds to abandon the valleys."

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2 I see no reason why planned violations of an existing law are allowed in the EIS. It simply is not true that impacts cannot be avoided. In the first place, the government does not have to issue a lease to a phosphate company if an Endangered Species is jeopardized. Stipulations could placed in the contract that the mine will be closed down during nesting and brood rearing seasons of Whooping Cranes. This type of regulatory capacity should be retained by the Bureau of Sport Fisheries and Wildlife, The Forest Service, or the Bureau of Land Management. Off road vehicles and other human disturbances are controlable- - areas can be closed to entry at critical periods.

2. There are no planned violations to existing law. Under the Endangered Species Act, designated critical habitat must be preserved. In southeastern Idaho, these have not been designated at this time, although, the Grays Lake area has been recommended as critical habitat for the whooping crane. Inasmuch as the proposed mining plans are on already-existing leases, the question of issuance of a lease is moot. Regulation of grazing on Federal lands, and the purchase of lands to compensate for impacts are discussed in the FES.

Grazing in critical habitat can be regulated. Lands could be purchased to attempt to mitigate the loss of habitat, but these concepts are not seriously considered in the EIS.

3. The language used in the section on mitigation (p. 1-420 - 456) could be strengthened. There are forty or fifty "should", "could be", might be, wherever possible, etc, which if strengthened to will be, must be, etc would make it believable that mitigation will even be attempted.

Finally, I feel that the EIS should outline procedures to moniter the environment in and around the phosphate mines and plants, complete with costs and sources of money. As an example, there are open settling ponds behind the FMC and Simplot plants near Pocatello, which probably are highly toxic at times. There are no listed procedures to moniter these ponds, but the information is needed in order to establish their environmental impact. For example, about six Whistling Swans were found dead in the FMC ponds a few winters ago. A White Pelican was found in weakened condition near the freeway which runs by Simplots plant this summer. Last winter I watched thousands of Mallards landing on the unfrozen ponds behind the Pocatello Simplot plant. I eat Mallards and would like to know whether they are becomming poisened in these ponds. The fact that the nesting Golden Eagle immediatly behind the Simplot Plant successfully fledges one or two young each year is reasuring to me. The ducks cannot be too toxic if the eagle nests successfully. This points out the value of predators, however, and illustrates why we must take additional efforts to study and protect them. I do not feel that the draft EIS adequately deals with these problems. In addition, it should not propose violations of existing Federal and State laws - in fact, its function is to ensure their enforcement.

4.

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3. Mitigating measures that will be required by the involved agencies (FS, GS, BLM) are so stated. Inasmuch as the Task Force does not have authority to commit other Federal, State, and local agencies and/or organizations to other possible measures, these can only be cited as "should" or "could" be adopted. By so indicating these measures, the Task Force has alerted the appropriate agencies who have authority to act.

4. A discussion of monitoring has been added to the manuscript.

environment west
research & planning, inc.

208-726-5493 • BOX 449 • SUN VALLEY, IDAHO 83353

September 23, 1976

Interagency Phosphate Task Force
P.O. Box 230
Pocatello, Idaho 83201

Dear Sirs:

We were unable to attend the public hearing on the Draft Environmental Impact Statement concerning the phosphate expansion in East Idaho, and therefor present the following as our input for your consideration.

1-We should conduct ourselves today in a manner which will lead to and form a basis from which to provide for a quality existence for generations removed thousands of years from today, i.e. not glutting our pockets and markets for today's gain, but slowly and prudently, with the realization of our finite resources worldwide!

2-There is no need for a boom in phosphate mining because of the imbalance it creates in the social and economic profile of the affected area, and especially in an area as relatively undeveloped as East Idaho.

3-Each mine should be required to produce an EIS as well as bonding for reclamation and also proof of need.

Please seriously consider these points before rushing to exploit our country for immediate greed.

Sincerely,

Richard B. Meyer

Richard B. Meyer, President

Lois Sorensen

Lois Sorensen, Secretary

1. These points are being considered.

The whole is greater than the sum of its parts.

307 Elder Building
Coeur d'Alene, ID 83814
21 September 1976

U.S. Forest Service
Pocatello, Idaho 83201

RE: Phosphate Mining E.I.S.

Dear Sir:

I wish to make the following testimony part of the record on the draft Environmental Impact Statement on the proposed expanded phosphate mining. The Kootenai Environmental Alliance supports the following recommendations:

1. The Secretary of the Interior should limit phosphate production to the current level in eastern Idaho by granting approval of mine plans only as they are needed to maintain the present level of production. Those with least adverse environmental impacts should be given priority approval. Stabilization of phosphate production in eastern Idaho is not considered in the draft E.I.S. and it well should be for proper management and planning. 1

2. A separate E.I.S. should be prepared for each new mine proposal submitted for approval. This is necessary to properly involve the public in such enterprises. 2

3. The Secretary of the Interior should request that Congress pass new legislation to impose a higher royalty for phosphate rock mined on federal land with the increment to be used for research and reclamation and wildlife damage mitigation. Such areas as dumps, ponds, and service areas could probably be reclaimed. 3

4. The Secretary should deny all applications for prospecting permits now pending which involve 121,000 acres of land. The draft E.I.S. has not indicated a need for such a large production of phosphate. The State Air and Water Quality Laws should be conscientiously observed and considered in the E.I.S. 4

Thank you for your consideration of these comments.

Sincerely,

Richard W. Swaney, Chairman

RWS:nr

KOOTENAI ENVIRONMENTAL ALLIANCE

CARIBOU NATIONAL FOREST
SEP 2 1976
Supervisor
Rgn. Staff
Land Staff
For. Engr.
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1. The Secretary's authority to control levels of mining are discussed in Part 1, Chapter VIII.

2. Under Federal Regulations 30 CFR 231, each proposed mining plan will require an environmental analysis to determine the necessity for a separate EIS.

3. Recent Federal actions subsequent to preparation of this DES have increased both the royalty payments to the Federal government and the State's share of these royalties. Discussion of these have been added to the text.

4. Denial of prospecting permit applications is an alternative available to the Secretary. Approved mining operations must conform to Federal and State air and water quality laws.

September 26, 1976

FRIENDS OF THE EARTH

Dear Mr. Schneider,

These comments on the draft environmental statement for the development of phosphate resources in southeastern Idaho are submitted on behalf of Friends of the Earth.

The announcement by Governor Andrus, at the public hearing on this draft statement in Boise, that a joint federal-state team would prepare the final environmental statement, was a welcome one. I wish to thank Secretary Kleppe and the Department of Interior for this action.

This action changes the status of the draft that has been released. By agreeing to the joint team, the Department of Interior implicitly admitted the inadequacy of the draft. The final statement will apparently be a substantially different document. Critical errors and omissions in the draft which could have been avoided by state involvement will be corrected. The state's stake and role and capabilities regarding
1 the phosphate development, which were slighted in the draft, will be thoroughly analyzed.

So I think it is fair that the public be allowed a second formal period of 60 days to study and comment upon the final statement, before a decision is made. These comments would have equal weight with those made on the draft. I feel confusion about what in the draft is accurate and what is not, and about what the draft fails to say. I am responding here to a document which the official parties involved have essentially admitted is inadequate. On a matter of such importance, I wish to base what I say on the accurate and complete document. I am not requesting a whole new document after the final statement, but that provision be made for a second round of public comment, and consideration of it.

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Approval of these mining plans will accord phosphate mining dominance over other land values in a vast area. I reject this kind of land management generally, and particularly here because of the special worth of some of the other values. I favor continued mining at the current production level, coupled with intensive work to make the mining more compatible with long term land uses. I favor a system of control such that mines with the least environmental impact are developed first, with prospecting conducted to further this objective. I see no need to increase mining much above current levels for at least 15 years, and I don't believe the mining companies, naturally more concerned with the way their operations affect their profits than with the way they affect our lives, should have control, deliberate or blind, of the pace, places, and effects of development. I am most personally concerned with the terrible consequences this development will have for fish and wildlife--for individual animals destroyed and for habitat diminished over time from causes gross and subtle.

Page 1-3--"With a continuing softening market for elemental phosphorous and phosphate fertilizer products by late 1975, actual mining could progress at lower rates than originally anticipated if the trend continues." This is the point the mining companies made repeatedly in criticizing the draft statement at the public hearings--that the impacts are much overstated because the level of mining analyzed is improbably high.

The criticism is partially valid, because the Task Force could have developed
2 various mining level scenarios, as was done in the Forest Service's Diamond Creek document, to give a better picture of the possibilities present. But the Task Force had to devote its major analysis to the mining level it did, because this is the level that results when the 15 mining plans submitted by the companies are combined. The companies are criticizing themselves. At the two hearings I attended, I did not

1. The revisions to the draft statement brought about by the public comment process and the participation of the State in preparation of the final have not so changed the proposed actions or potential impacts to the extent that recirculation as a "Revised" draft statement is warranted.

As identified in the final statement, industry has revised downward its expected production rates and new operations. As a result, the statement now analyzes a new and more probable level of development, and retains the initial analysis of a significantly higher production rate.

The discussion and interpretations of the department's minerals management objections is noted. The impact statement is not the decision-making document within the Department of the Interior, and under the CEQ Guidelines, no decisions on the proposed actions will likely be made for at least 30 days after filing of this final statement. Environmental concerns indentified through the EIS process will be an important, but not necessarily the only, consideration given in the various subsequent decisions; the decision process will indeed consider many non-environmental concerns, including other Departmental responsibilities and obligations under existing law.

2. See response to comment 1.

Northwest office 4512 University Way NE Seattle, Washington 98105 (206) 633-1661

This is recycled paper.

hear any of the company representatives who made this criticism document it by withdrawing or amending the mining plans their companies had submitted.

It would be welcome if the phosphate market prevented mining at the level proposed, but the present market trend could stabilize or reverse, and anyway the question is irrelevant to the determination of the proper federal action. The plans must be approved or denied as presented, not as they might be affected by indeterminate forces. And the entire development complex--mining plans (whether any eight or all fifteen), existing mines, proposed mines on private land, processing plants, roads, railroads, etc.--demonstrates an immediate need for a method to control and direct the development in accordance with long term guidelines, perhaps not unlike the minerals-management objectives of the Department of Interior.

Page 1-15--"The minerals-management objectives of the Department of the Interior are for (1) orderly and timely resource development, (2) protection of the environment, and (3) receipt of fair market value for disposition of the mineral resources." It seems likely the proposed development will violate all three.

It violates (2) with a vengeance.

2 Its willy-nilly nature, not orderly, is revealed by the major social and environmental dislocations it will cause, the way it has been formed (by independent business decisions of eight companies), and the manifest federal and state unpreparedness to cope with it.

The development does not appear timely. The international phosphate supply situation is not analyzed. Data on domestic supply and demand are presented unsupported, but what is given argues that domestic demand for western phosphate rock will rise much slower than the companies propose to expend supply (Figure 1-3B, Page 1-27). No analysis of the timeliness of the large export market thus created is presented. No analysis is made of the long term world supply situation--how fast are we backing into the narrow corner of depletion? No analysis is made of the potential for conservation in the use of phosphate products. Timeliness is not demonstrated.

Only brief mention is made of the money received by the government from phosphate leases and mining operations, and no attempt is made to explain "fair market value" or if and how it relates to money currently received. If the leases follow the general pattern, such as for peat coal leases, the government is receiving far less than fair market value. The draft statement does not demonstrate otherwise.

So it appears that all of the Department's minerals-management objectives are violated by the proposed development. That appearance is not refuted in the draft. It is remarkable that these three points are listed as the minerals-management objectives of the Department, and then are not mentioned again. No attempt is made to relate the proposed development to them.

3 Page 1-14--Here and throughout the statement, the federal regulations which cover mining are said to "provide protection of nonmineral resources", of "surface resources", of "the environment". They actually provide a measure of protection, in many cases a small measure, in some none at all. Other words--reclamation, mitigation--also mean one thing to most people and another thing to those familiar with the Code of Federal Regulations.

4 Page 1-103--"About 70% of the stream channels are in good condition, about 20% are in fair condition, and about 10% are in poor condition." These should be mapped or listed.

5 Page 1-120--Because of the long time between release of the draft and release of the final statement, it should be possible to expand the section on water quality significantly.

6 Pages 1-142,143--Table 1-14a lists water quality data for selected stations P-1 through P-7 on the Portneuf River. Why weren't the same data for stations 9 and 10--the FMC and Simplot plants--included in the table?

7 Pages 1-191 through 1-233--These pages, plus Maps 8 and 9, describe the present wildlife and fish situation. The Idaho Department of Fish and Game has criticized inac-

3. These regulations have been published in the Federal Register; copies are generally available from the appropriate agencies. As with any written material, individual interpretations of both the substance and intent of the language is, of course, entirely possible.

4. These percentages are based on a sample of 94 stream reaches reconnoitered in 1973 to determine the general condition of streams and stream channels. Inasmuch as the observations were reconnaissance level, detailed mapping is not warranted. The field notes are on file at the Forest Service office in Pocatello, Idaho.

5. The manuscript now includes additional data on water quality which further substantiate the conclusions in the DES.

6. Data for P-9 and -10 have been added to table 14a.

7. A State team appointed by the Governor has worked closely with the Task Force in the preparation of the FES. The concerns of the State agencies have been resolved and incorporated in the FES. Neither the State team nor the Task Force feel that the FES as developed is sufficiently changed to warrant reissue as a revised draft. The Forest Service, Fish and Wildlife Service, BLM and Idaho Fish and Game Department have prepared proposals to monitor impacts. These agencies are in the process of attempting to obtain financing to begin filling the gaps.

curacies and omissions in this information. Their statement given at the public hearing in Boise is an excellent general statement of the inadequacies of this part of the DES. I haven't seen the detailed written comments they will also submit, but I am sure they will be equally constructive. The final statement must respond to each point they raise. The people of Idaho are speaking through them.

7. My request for a public comment period on the final statement of equal weight with that on the draft is based mainly on my belief that the final statement will give a more accurate and complete picture of the present fish and wildlife situation. The Fish and Game criticisms, and their participation in writing the final statement, will lead to major changes in this section. The Department's strenuous criticism of the draft, a fairly unusual action for them, makes me unsure about basing my judgments on the information presented in it.

Fish and Game participation will fill in some of the gaps in the draft, but many must remain, because the fish and wildlife resources of the area have never been thoroughly studied by anyone. The final statement should include a section on the major gaps in information, the way they affect assessment of impacts, and the possibilities for filling the gaps.

8. The location and value of the scattered roadless areas in the study area should be discussed. Fairly heavy agricultural development is present in much of this area, there is a large mileage of primitive roads, and heavy recreational use exists. The roadless areas that remain have in this situation a value to wildlife disproportionate to their size. They are important to the habitat needs of many species.

9. Present operations and future plans of the Grays Lake and Bear River National Wildlife Refuges should be more thoroughly discussed. Mention of these refuges is scattered throughout the wildlife section, they receive a bare mention on page 1-275, and are briefly described on page 1-312, but their operations and wildlife production should be pulled together in a complete discussion. Specific information should be presented on how the operations of the refuges relate to the surrounding land and water resources that are within the study area.

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10. The Fish and Wildlife Service has the duty under the Endangered Species Act to designate critical habitat for all species listed as "endangered". Two such species, the peregrine falcon and whooping crane, are present in this study area. The Fish and Wildlife Service should be contacted regarding the status of the critical habitat designation for these species. Has the process begun? Has the study area received notice in this regard?

11. Page 1-251—The Idaho Surface Mining Act is considerably weaker than the discussion of it here indicates. Sections 47-1509 and 47-1510 of the Act deal with reclamation requirements. Reclamation is not defined. Stockpiling of topsoil is not required. Vegetation planting need not be done on mined areas where the mine-created conditions make such planting not "practicable or reasonable." The act requires only a reclamation attempt, not success, and the attempt need be made only once. In short, the Act does not "provide for reclamation" of surface-mined lands. This is again an example of official doubletalk, here at the state level.

12. Page 1-252—"Restoration and revegetation of mine dumps has been a continuing effort on federally-leased phosphate lands in Idaho. Efforts were seriously initiated in the mid-1960's when four companies...entered into a cooperative study with the Forest Service to determine how best to rehabilitate surface mined areas...The study agreement expired in 1970 but efforts have continued over the years by the companies and the administering Federal agencies." The scope and practical benefits of these efforts are central in determin ing long-term mining impacts. They should be described in detail. What work has been done, what is the scope of current efforts, what practical knowledge has been gained and applied?

It is true that the Idaho Fish and Game Department plans to restore for deer winter range the 400 acres at the Waterloo mine donated by Stauffer Chemical Company, but it should be added that the Department does not have the money for this major undertaking, nor does it have prospects of getting it soon.

8 & 9. We agree that the roadless areas provide important habitat for many wildlife species. The operations and contributions of the Grays Lake and Bear River Wildlife Refuges, while significant to wildlife, are however not germane to determination of impact of mining.

10. Yes. The proposed critical habitat for the whooping crane was entered in the Federal Register in 1976. No critical habitat has been designated for the peregrine falcon; however, national recovery teams are currently evaluating the area.

11. The Act may not specifically require stockpiling of topsoil, but the Act does require that "abandoned affected lands shall be topped to the extent that such overburden is reasonably available from the pit, with the type of overburden which is conductive to the control of erosion or the growth of vegetation" (Section 47-1509 (a)(7). This suggests that for an operator to comply with this provision of the Act he must stockpile high quality overburden for future use in revegetation.

It is true that in some cases mine-created conditions will make attempts at revegetation unreasonable or impractical. However, on all affected land except where pit highwalls or side slopes are too steep to allow vegetation to become established or where very scarce to no vegetation existed prior to mining, revegetation will be required.

The statement that "the Act requires only a reclamation attempt, not success, and the attempt need be made only once" is false and unjustified. The Act requires an operator to begin reclamation procedures, on affected land, within one year from the date of abandonment or the date when mining operations permanently cease. When the operator has completed all reclamation requirements, he shall notify the Land Board. Within thrity (30) days after receipt of such notice, the Land Board shall cause an inspection of such land to determine whether or not the reclamation performed meets the requirements of the Act and then notify the operator of the Land Board's findings. If the reclamation is not acceptable to the Land Board, the operator will be given a schedule by when he must correct all deficiencies. The operator's performance bond, for said affected land, will not be released until the Land Board determines that reclamation, of said land is acceptable.

12. Additional description of the scope and results of the joint industry-Forest Service rehabilitation efforts has been added to the text.

13. Page 1-254--"The Forest Service expenditures for this project [watershed rehabilitation at the inactive Georgetown Canyon mine] between 1970 and September 1975 were more than $92,000." An itemization of public expenditures over the years to repair and prevent mine damage and develop reclamation methods in the study area should be included. The possibilities of future expenditures related to the proposed development should be discussed.

14. Pages 1-255 through 1-259--A more serious effort to relate past and present reclamation work to the proposed development could be made. Data on reclamation work at existing mines should include elevation, percent of cover or vegetative production achieved, kinds of species, costs, etc. The applicability of this data to the proposed mine sites should be assessed.

15. Page 1-260--"Active research is continuing by both industry and governmental agencies to improve reclamation techniques." This research should be detailed.

16. Pages 1-275, 276--"Under the Fish and Wildlife Coordination Act of 1958...the Secretary of the Interior...is authorized to make such investigations as he deems necessary to determine the effects of ...mine operations...on wildlife." How could this authority be exercised in the study area? Could these investigations be made in advance of the development proposed here, to gather needed information and help predict impacts? Are there any plans to use this authority in the study area?

17. Page 1-308--"There is so little urbanization and development in the study area that practically the entire area is available for outdoor recreation." This is not true Agricultural development over much of the area prevents outdoor recreation of many types, either seasonally or year round. The mine recreation sites are the undeveloped foothills, mountains, and canyons--the land on which the mining and associated development is proposed.

18. Page 1-338--"there are indications that another company may not begin its new proposed operations in southeastern Idaho as previously indicated. Other companies also have indicated that they are reconsidering proposed expansions." What companies and mines are you speaking about? If this comes under that idiot phrase "confidential information", it is a precise indication of the foolishness of the present method of development of public resources. This is obviously relevant information. The government has it, the companies have it, the public does not have it. One would have difficulty fitting this situation into a textbook on democratic government. If confidentiality is not involved, please forgive my outburst and tell us what companies you are speaking of.

19. Page 1-340--The statement should not slide around direct expression of impacts. If "water used consumptively would result in a net depletion of flows in surface streams in most instances", and if "all surface flows in both the Bear and Snake River basins are now appropriated for other uses", then a direct impact on present waterusers follows, should be stated directly, and detailed as well as possible.

The effect of new power plants on water supply "cannot be assessed at this time because it is not known if additional power plants are proposed for the study area. Such impacts cannot be assessed until such time as a specific site, type of plant, and capacity are proposed." This is not true. The only two types of plants likely to be constructed in the area in the short-term future are coal fired and nuclear plants. Capacity possibilities are not hard to estimate or display. The general water requirements of these plants at various capacities are known. And while no power plants have been proposed yet, the rejection of Idaho Power's Pioneer plant makes a proposal probable. Idaho utilities are not known for early announcement of their intentions.

20. Pages 1-373 through 1-385--Comments by the Fish and Game Department lead me to believe this section on impacts to wildlife and fish is understated. Yet, as stated, it depicts a fish and wildlife disaster. The following section on mitigation reveals that the disaster is beyond mitigation. These pages present the argument against this development.

21. Page 1-414--"Approximately 25 percent of the passive and active recreational opportunities will be lost in the study area as a result of mining and population pressures. However these outdoor recreation activities are expected to be transferred

13. The expenditure for rehabilitation in Georgetown Canyon was by far the largest public expenditure for this purpose, and was necessitated by the failure of the company and inadequate bonding. Such expenditures of public funds are not anticipated in the future, inasmuch as present-day reclamation requirements and bonding, subject to periodic review for sufficiency, are deemed adequate to prevent such occurrences.

14. Very serious and continuing work is being done by the mining companies, and Federal agencies, separately and in concert, toward applying lessons from past experience, studies, and tests toward obtaining better and quicker rehabilitation at minimum cost.

15. This research is detailed in the FES.

16. The Fish and Wildlife Coordination Act could apply if discharges from the mining operations are made to the various streams. There are no plans by the Fish and Wildlife Service at the present time to use the authority of this Act. Several agencies, however, are now involved in data collection which will assist in determining impacts more precisely. The Fish and Wildlife Service and the SEAM Program of the Forest Service are reviewing research proposals of the Idaho Fish and Game Department to determine if cooperative studies can be undertaken. The ideal situation is to have such studies before the mining starts, and to then work with industry to mitigate fish and wildlife losses.

17. Urban development within the study area is very small. Recreation such as hunting (birds and big game), snowmobiling, and related activities can occur on agriculturally developed lands. It is true that many recreation opportunities are precluded because of development and restrictions on these lands however they can provide the base for some activities as other agricultural lands do in this part of the country.

18. Changing market conditions since the preparation of the DES have significantly altered original projections. The new, more probable rate of development has been incorporated into the FES. See Table 1-1-a for specific details.

19. Additional power plants may or may not be constructed in the area depending upon source of fuel, source and availability of water, and proximity to load centers. Although there will be additional electrical demand, it cannot be said with certainty that the phosphate industry is the factor necessitating a plant being built.

20. It is the perogative of the Secretary of the Interior to alter or require specifications in the mining plans to help mitigate the wildlife impacts. The Idaho Fish and Game Department has stated they believe the impacts to wildlife and fish are understated. We believe the impacts will be severe and without adequate mitigating measures they will remain so.

21. The text has been amplified to clarify how the figure was determined.

to other areas." How was the figure of 25% arrived at? Who expects this transfer, and to what other areas? Before beginning these comments, I spent three days wandering around this area that would be hard to transfer.

21

Page 1-452--"The influx of additional people from phosphate mining and processing operations, increased demands on outdoor recreation resources, and changes in the area's landscape with related adverse effects on recreation resources will call for strict regulatory measures for mitigation of cumulative impacts on wildlife and aesthetics to maintain quality outdoor recreation." Please explain what strict regulatory measures you have in mind. I am convinced that the only way to maintain quality outdoor recreation in the area is to reject most of the mining plans.

22

Page 1-459--"Sections 40-106, 109, 111, 112, 136, Idaho Code, provide that the improvement of highways is the established and permanent policy of the State of Idaho. Adherence to these policies by the Idaho Division of Highways will mitigate a major portion of the impact on the regional highway network." The Idaho Division of Highways hasn't got the money to adhere to these policies, as the statement admitted 39 pages previously.

23

Page 1-484--"The impact to the wildlife as related to the short-term use versus the long-term productivity would depend upon the time required to reestablish suitable environmental conditions." Once this development occurs, it will be remarkable if the present environmental conditions for wildlife and fish are ever reestablished. The altered environment will be firmly established by the time mining comes to an end. No reestablishment of present conditions can be anticipated; the loss of wildlife habitat will be essentially irrevocable.

24

Page 1-486--"It is difficult to consider phosphate extraction as a short-term use of man's environment". At the proposed mining rate, known reserves in the area will be exhausted around 2050. It is difficult to see this as anything but a short-term use of man's environment.

25

Page 1-492--"The irreversible alteration or reduction of suitable habitat would impede the recovery and reestablishment of the peregrine falcon and whooping crane." This implies such recovery will occur; survival is what is at stake for both species, recovery being some time in the future.

26

Pages 1-495 through 1-532--Several alternatives are preferable to the proposed action. If the Department of the Interior takes its stated minerals-management objectives seriously, the Secretary has clear proper cause to defer final action on all proposed mining plans. This development is not in accord with those objectives. Approval should not be given to mining proposals scheduled to begin in 1980 or later; decision on those scheduled before that date should be deferred pending creation of a coordinated government program for phosphate development. The federal and state governments are justified in jumping in with both feet here because the companies are simply incapable of responding to the many serious and the few enormous impacts their operations will cause.

Certain mining plans I will list later should be rejected. The DES states on page 1-504, "The Secretary may reject any individual proposed activity that does not meet the prescriptions of applicable law..." As the Idaho Department of Health and Welfare noted in their testimony at Boise, the proposed development would "result in degradation of water quality throughout the development area, to the extent that the present uses of the water will be jeopardized. Such degradation is illegal under Section 111.D., Idaho Water Quality Standards and Wastewater Treatment Requirements (1973)...violation of this state law would also be a violation of...section 313 of the Federal Water Pollution Control Act Amendments of 1972 (PL 92-500)." Thus there are legal grounds to reject the mining plans.

27

Part 2--No new prospecting permits, competitive leases, and fringe acreage applications not tied to existing mines should be approved until the coordinated program mentioned above is operating. The bare bones of what this program should consist of are given on page 1-531.

337

22. These should include analyses of recreational uses and demands on site-specific basis, and actions by appropriate Federal and State agencies with authority to take necessary actions.

23. The Idaho Department of Highways adheres to the policies of the Idaho Code. Funding to implement necessary programs, as stated in the DES, is the problem. The Idaho Transportation Department has expressed concern that the demand for improved highway facilities could not be met on a timely basis. This problem will be somewhat relieved at the lower, more probable level of mining and should shorten the lag period to some extent.

24. To some extent, we agree. However, reclamation as required in Part 1, Chapter IV will at least partially restore some of the habitat. We do not agree that the loss of wildlife habitat is irrevocable.

25. There are one billion tons of reserves by today's standards and over six billion tons of phosphate resources identified in the area. Extraction of these resources at a growth rate of two to three percent per year would extend well past the 21st century.

26. National recovery teams were organized by the U.S. Fish and Wildlife Service in 1974 to aid in the reestablishment of the peregrine falcon.

Those associated with the Grays Lake whooping crane project are optimistic that the addition of numbers to the total population will not only aid the survival, but will also contribute to the recovery of the species.

27. The alternatives are described in Part 1, Chapter VIII. These have been amplified in the final to provide a broader range of perspectives. Each mining operation on Federal lease, if approved, must comply with all Federal and State air and water quality laws.

Part 3--Certain transportation proposals deserve specific opposition. The Blackfoot River Road from the Wooley Valley mine junction through the Narrows to the Diamond Creek road should not be paved or widened. No railroad should be constructed through the Narrows. The road from Hayns south along Lanes Creek, Diamond Creek, and through Georgetown Canyon to Georgetown should not be paved or widened. The present state of these roads is a protection against intensive use that should continue to operate, on behalf of the primitive and natural values dominant there now. Long may they dominate.

28

Part 4.1--The Diamond Creek mining plan should be rejected. On page 4-2, the DES states, "As an essential part of the proposed mine, Alumet has applied for 650 acres of fringe acreage." On page 2-68, it is stated that "the Secretary has full discretion in his action" on fringe-acreage lease applications. This application should be denied as a way of preventing mining at the Diamond Creek site.

If Alumet applies to mine without the fringe acreage, action on the plan should be deferred pending creation of the phosphate development program mentioned above. Hopefully that program will include a way to prevent mining at this site forever.

29

This is one of the worst sites for proposed mining. There are heavy direct impacts to fish and wildlife and recreational values, and there are heavy long term indirect impacts to these same values, plus impacts to land, air, and water, caused by the proposed road and railroad expansion to reach the mine. The damage cannot be mitigated. This site and any others in the Diamond Creek drainage should receive no mining.

Part 4.2--The Swan Lake Gulch mine would also have a heavy impact on wildlife, particularly deer. Action on this mining plan should be deferred pending creation of a comprehensive phosphate development policy. Mining in any case is not scheduled for many years.

30

Part 5.1--The principle adverse effect of the South Maybe Canyon mine is disruption of three migration routes for deer and elk. The exact importance and intensity of use of these routes is not analyzed. Although this mine appears to be alogical extension of an existing mine, approval should not be granted until a full assessment of these migration routes has been made, involving the Department of Fish and Game. Consider, to include a more exact assessment of the mine's effect on them and the possibilities for mitigation and prevention of impacts. An important part of the comprehensive phosphate program I have suggested is a more intensive evaluation of the impacts from all mines and the possibilities for preventing and mitigating them. The information presented in the statement on these points is necessarily general, because the sites have not been studied professionally from this angle.

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31

Parts 5.2 and 5.3--It appears that the transportation systems necessary for these mines would have more impact than the mines themselves. Since the operations at both mines would be over in a short time, analysis in the final statement and as a part of the comprehensive program should focus on the reversibility of the transportation system. Can the areas affected by the proposed roads or railroad be restored to their present use and productivity upon completion of mining?

32

Part 6--I am not familiar with underground phosphate mining, and I am not familiar with this site. If the mining will proceed whatever the federal action, it seems sensible to allow mining on the lease; but whether the outlined mining plan is acceptable I am unable to say.

33

Part 7--The Dry Valley mine would have heavy impacts on wildlife. Action on this proposal should be deferred.

34

Part 8--The Husky No. 1 mining plan should be rejected. No mining should occur on this lease. The impacts to wildlife and fish will be high. Stewart Creek is a tributary of Diamond Creek, and I oppose mining within that drainage. Its present value is more important.

35

Part 9--Action on all four of Monsanto's mining proposals should be deferred. For a small mine, the impacts to wildlife from the North Henry Continuation will be high. Analysis should focus on the long-term effects on wildlife from the three years of mining, and the possibility of returning to present productivity and use when mining is done. The three other proposals have high impacts on wildlife, particularly the Blackfoot Bridge proposal.

36

28. If the Secretary of the Interior approves the Diamond Creek mine proposal, further assessment of transportation requirements, alternative routings and environmental tradeoffs will be necessary. Concerns such as these and other criticisms of transportation routes through the Blackfoot Narrows will be considered in the analysis.

29. The impacts summarized here are noted in the Environmental Impact Statement. The alternatives relating to disapproval of these mining plans are discussed in Part 1.

30. See response to comment number 29.

31. Proposals have been made by the U.S. Forest Service, Fish and Wildlife Service, BLM, and the Idaho Fish and Game Department to intensively study, monitor and analyze the big game migration routes. Once financing is obtained, these studies will begin, hopefully prior to any mining activities. Monitoring proposals had not been developed at the time the DES was completed; they are described in this FES.

32. The route of the proposed haul road is tentative, and final approval will not be granted until further environmental assessments have been conducted. One important criteria will be a location that facilitates reclamation. As stated in Part 3, Chapter V, full restoration to original use and productivity cannot be fully achieved.

33. Acceptability of the mining plan and evaluation of the plan under Federal Regulations 30 CFR 231 is the responsibility of the District Mining Supervisor, USGS.

34. The Secretary of the Interior will make the decision on this proposal after reviewing the EIS and public comment.

35. We agree the impacts will be high on the fish and wildlife resources. After reviewing the EIS and public comments, the Secretary of the Interior will determine whether to approve or reject the mining plans.

36. The alternative of deferred action is discussed in Part 1.

Part 10—Action on both Simplot proposals should be deferred. The Middle Sulphur Canyon mine would have heavy impacts on wildlife, and I don't see that they can be significantly mitigated. The DES states on page 10-55, "The mining plan should be modified to preserve the habitat of the endangered peregrine falcon and bald eagle
37 wintering areas." How could this be done? I don't see that any action, except no mine, could guarantee it. I am opposed to future mining at this site.
Part 11—Stauffer's two mining proposals should be likewise deferred. The potential of these mines to affect the fisheries in Angus, Sheep, and Lanes Creek should receive more study.

I have missed one point. The alternative of stabilizing phosphate production at or near the current level should be analyzed in the final statement. The Forest Service does this briefly in their Diamond Creek statement, but this alternative applied to the entire study area needs attention here.

The proposed development's impact on fish and wildlife, as revealed in this statement, is unacceptable. I am not personally acquainted with any area of Idaho richer in fish and wildlife variety than the study area. The usual pressures on wildlife habitat in the state, which are hard to control even with the will and power to control them, are continuously operating—conversion of range to agricultural land,
38 urbanization, recreation increases, more roads, etc. Idaho's wildlife, by which I mean the full range of species present here, is in a tight corner, put there by man and only able to maintain its position there at man's sufferance. This statement speaks, somewhat unthinkingly, of the transfer of recreational opportunity from the study area to other areas, but there can be no such transfers of fish and wildlife. The crucial habitat that is left statewide must now be preserved, or the Idaho of wild animals is lost. This area is part of that crucial habitat. I am opposed to mining at a scale that will destroy it.

Thank you.

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Pat Ford
800 Sekin Avenue
Idaho Falls Idaho
83401

37. The mining plan, as submitted, is conceptual. Additional details will be required for final consideration of approval or disapproval of these mining plans.

38. Establishing levels of mining is an alternative that is discussed in this document. A major reduction in the scale of mining would have to occur before the wildlife impacts will be measureably reduced. Where habitats are involved for Endangered Species, the Secretary will have to provide for the protection of these species. However, to date no critical habitats that have been defined in the Federal Register cover any of the proposed minesites.

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Conservation Chairperson
Snake River Audubon Society
8/29/76

Interagency Phosphate Task Force
P.O. Box 230
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Dear Sirs:

After reading the DEIS, visiting the phosphate area, listening to both Idaho Fish and Game employees and mining company employees, and visiting the Grays Lake National Wildlife Refuge, I can see no reasons to allow phosphate production to increase in the study area significantly over the present rate. On the contrary I can find many reasons why production should be held to the present level.

Phosphate is a non-renewable resource. It is also a resource which will not deteriorate with time. It will still be available for mining in the future if it is not mined now. In addition, the United States is not critically short of phosphate. We have such and excess of it at present that we are exporting about one-third of our annual production. It seems to be illogical to be in a hurry to mine and export a resource which is necessary for agriculture, non-renewable, and non-deteriorating merely so that some private companies may make a profit (from public lands) as quickly as possible. This course of action also seems to be very poor social planning and detrimental to our society. However, not only is this planned, it is planned at an enormous environmental, social, and energy cost to Idaho and the United States!!! It should be kept in mind that when our phosphate resources do run out we may not be able to obtain any more phosphate from anywhere. If we are able to buy phosphate, we will be at the mercy of whatever foreign country has the market currently cornered.

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Even with all of the current environmental restrictions, great environmental damage is going to be done to the countryside simply by increasing the level of human activity there. Increased numbers of roads, traffic, more people moving into the area, increased demand for power and more power plants will be some of the effects of an increased level of mining activity. There are recent indications (Idaho Tomorrow Survey, three county votes on the Pioneer power Plant) that the citizens of Idaho do not desire this greatly increased rate of growth. In any case, the rate of phosphate mining itself, irrespective of direct damage caused by mining, causes one of the principal damages to the environment. According to the DEIS, that while the Secretary of the Interior does not have the power to schedule the rate or timing of mining, he does have the right to "protect the environment" and make sure that the resource is developed in an "orderly and timely fashion." I feel that his duties to protect the environment and develope the phosphate resource in an orderly and timely fashion give the Secretary of the Interior power to

1. The Secretary of the Interior is mandated by NEPA and other Federal regulations to protect the environment. The alternatives available to the Secretary are discussed in Part 1, Chapter VIII.

1. regulate the schedule and rate of mining.

Phosphate production should be held to roughly the current level. If state and federal laws are enforced, the current rate of production is acceptable environmentally. Domestic phosphate needs of the United States can be satisfied for a great many years to come at this rate. If the top graph on page 1-27 of Volume I of the DEIS is examined, it will be seen that if United States demand is held at the present level, the current supply from Florida alone almost doubles current U.S. demand until the year 2000. However, according to the DEIS, domestic demand is expected to increase by about 3% per year until at least the end of the century. 1.03 to the 24th power is 2.032. This means that demand will more than double in the next 24 years in the U.S. As about 85% of phosphate ore goes into making fertilizer, and I do not expect the U.S. to double either its
2. population or its appetite by the year 2000, it is difficult to see why we will require twice as much phosphate by the year 2000. I am confident that the phosphate mining companies can create a market for twice as much phosphate in the next 24 years, but this is a very different matter than requiring twice as much phosphate annually 24 years from now. Actually we could probably reduce our domestic consumption of phosphate significantly. India uses less phosphate fertilizer to grow food with than we in the U.S. use on our lawns and golf courses on a yearly basis! All that would be lost by holding phosphate production to the current level in Idaho would be a chance for some private companies to participate to a greater degree in the international market. This course of action would seem to me to be in the best interest of both the U.S. and Idaho.

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The effects on wildlife in the study area are simply atrocious. I will not detail all of the effects as this is done in the DEIS. However, I am particularly concerned about endangered species that exist in this area. Four of only 200 breeding pairs of peregrine falcons may nest in the study area. Whooping cranes are being established in the Grays Lake Refuge. Increased levels of mining in the area could bring the whooping crane experiment to a halt. Furthermore, one of the whooping cranes from last year's group of chicks is living south of Grays Lake near some of the area to be mined.
3. Many sandhill cranes live in the study area. As whooping cranes live in the same type of habitat as sandhills, this shows that much of the area is suitable habitat for whooping cranes. This subject was not treated in the DEIS, but I believe that if federal lands are shown to contain critical habitat for an endangered species, there are certain rules and regulations which apply. Does this situation exist in regard to either whooping cranes or peregrines? Should some of this area be declared "critical habitat?" Do these endangered species/critical habitat regulations apply? If so, will they be violated in any way by increased mining in the area?

It appears to me that mining some areas would be much more environmentally damaging than mining other areas. Some areas should perhaps not be mined at all. At the very least, the most environmentally sensitive areas should be the last areas to be mined because in the future
4. we may learn more about reclamation, our mining techniques may improve environmentally, or the phosphate may turn out to be not needed after all. According to the Idaho Environmental Council, the most

2. Since the preparation of the DES, market conditions have dictated reappraisal of levels of mining. A more probable level of mining is now also discussed in the FES.

3. The rules and regulations of the Endangered Species Act of 1973 do apply on all Federal lands relative to critical habitats of peregrine falcons and whooping cranes in the phosphate mining area. Critical habitats for these species are not treated in detail in the EIS because critical habitat for these species has not been determined by the U.S. Fish and Wildlife Service. The proposed critical habitat for whooping cranes is one mile outside the boundary of the Grays Lake National Wildlife Refuge, which will receive little or no direct impact from phosphate mining. The critical habitat outside the one mile buffer boundary could be extended once the whooping cranes establish nesting and brood rearing and feeding territories. Until such habitat is established and designated, the provision of the Endangered Species Act does not apply.

4. Consideration of each individual mining plan for approval will consider the environmental impacts of that particular operation. The Secretary of the Interior may deny approval of any mine plan considered environmentally unacceptable.

4 destructive proposed mines are Diamond Creek, Swan Lake Gulch, South Haybe Canyon, and Huskey Number 1.

In conclusion I would like to present the following suggestions:

1. All present applications for prospecting permits should be denied as the proposed sixteen mines only cover one-third of presently existing leases.

2. All applicable state and federal environmental protection laws and regulations should be strictly enforced.

5 3. Phosphate production in southeastern Idaho should be limited to its current level.

4. A separate EIS should be prepared for each mine before mining is allowed to proceed at that location.

5. Existing mining laws should be rewritten to get away from the "all or nothing" approach to an approach which regulates mining rates and schedules as well as sites.

Yours truly,

Charles H. Burgess

Charles H. Burgess

5. The five items listed are discussed in the appropriate places in the FES.

IDAHO ASSOCIATION OF COMMERCE & INDUSTRY
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September 23, 1976

Director
United States Geological Survey
National Center
Reston, Virginia 22092

Gentlemen:

The Idaho Association of Commerce and Industry asks inclusion of the following comments in the hearing record re the draft environmental impact statement on phosphate mining in southeastern Idaho. These comments are submitted as a supplement to the statement presented by Mr. P. K. Harwood on behalf of the Association at the hearing held on Monday, September 13, 1976, at the Holiday Inn, Boise, Idaho.

By way of identification, the Association's membership consists of business-industry entities varying in size from small to large, widely dispersed about the state, plus various trade associations and Chambers of Commerce.

Our comments will be general in nature but will incorporate some of the testimony delivered by persons who have testified at one or another of the public hearings held at various locations around the state. This incorporation will occur by specific reference at the end of this document.

The Association, as stated by Mr. Harwood on September 13, recognizes the importance of according extensive and deliberate attention to the environmental consequences of phosphate mining in southeastern Idaho, and would like to commend the Task Force for its thoroughness in preparation of the environmental impact statement.

We also recognize that the Environmental Protection Agency requires that an environmental impact statement must emphasize and concentrate on the environmental costs of the proposed action, largely ignoring possible benefits that may be derived from such action. In our opinion, this results in a statement which accentuates the negative and does not always present a true picture of the overall impact of the proposed action.

We sincerely believe and strongly recommend that a detailed enumeration of environmental impacts as presented in the draft environmental impact statement should be counterbalanced with an equally detailed economic impact statement which evaluates the benefits to be derived from the proposed action -- benefits not only to the immediate surrounding area, but to the regional and national economy and to the public consumer as well. These economic impact statements should also consider the impact of not undertaking the proposed action such as unemployment, loss of tax base, and localized depression.

The Association is fully aware of the value of the phosphate deposits to the people of Idaho and in a larger sense to the people of the United States. To paraphrase a statement presented at the Boise hearings, -- the phosphate industry is not only important to
1 the economy of southeastern Idaho, it is the economy of southeastern Idaho. The phosphate industry in southeastern Idaho directly employs about 2,500 workers with an annual payroll of about $31 million. In addition, about 2,700 workers are employed in phosphate-related industries with an annual payroll of about $28 million, and combined taxes paid by Idaho's phosphate industry totalled about $1,350,000 in 1975.

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The Association also recognizes the importance of the phosphate industry to both the farmers and consumers of Idaho and neighboring states. Alternate sources of fertilizer available to Idaho farmers are either expensive or unreliable, or both. It is estimated that 30 - 35 percent of the food available to consumers is attributable to the use of fertilizers. It is our belief that without adequate fertilizer supplies, consumers of Idaho and the U.S. would compete for about one-third less food, with resulting dramatic increases in price.

Concern has been expressed by numerous parties that the phosphate industry intends to greatly accelerate production in the near future, resulting in a boom-bust mining economy in southeastern Idaho. Industry projections indicate, however, that the market
2 for phosphate will expand at an average annual rate of about 3 percent. Recognizing that, over the long term, actual production can be no greater than sales, it is our contention that the development of phosphate deposits in Idaho under a free market condition would be no more extensive or rapid than the market for phosphate products requires. This would provide for growth of the industry at a moderate rate with minimal effect on the area's environment.

1. The comments have been noted.

2. A discussion of a more probable level of mining of 15 million tons by the year 2000 A.D. has been added to the text.

Some conclusions drawn in the draft impact statement concerning air emissions and waste water discharges were based on the assumption that future emissions and discharges would be in direct proportion to the production tonnage with no allowance for improved control technology. This assumption, although convenient for purposes of the study, greatly distorts the actual picture of total air emissions and waste water discharges resulting from future increases in production.

2

As you well know, the phosphate industry is operating under increasingly stringent surveillance and regulation administered by state and federal agencies. Future plants will be designed and constructed under new, more stringent, constraints, which will not permit them to function as existing plants presently function, but will require the application of more advanced emission control technology. Thus, impacts per unit of production from future plants, if built, would be smaller than from older plants which were built prior to the availability of modern emission control technology. In fact, in spite of projections to the contrary in the draft impact statement, air quality around the phosphate processing plants is generally improving, and will continue to improve as a result of more stringent regulation and improved technology.

In our opinion, the need for and benefits of continued development of Idaho's phosphate resources have been clearly documented in the draft environmental impact statement and subsequent testimony presented at the hearings. We are convinced that further, orderly development of phosphate reserves within southeastern Idaho can occur with minimal adverse effect upon the environment of the area.

3

We wish also to reiterate the belief earlier declared by Mr. Harwood that the state and the nation in reaching for a good future for its people must, and should, make use of Idaho's phosphate deposits, while minimizing any impact to our environment.

Accordingly, we recommend and urge that the Task Force proceed with all deliberate speed to complete the final draft of the environmental impact statement within the time frame allotted, and clear the way for further, orderly development of additional phosphate deposits in Idaho.

3. Until such future control technology is tested and proven, it would be improper to assume that impacts will be lessened. The assumption of a "worst case" situation based upon today's technology is valid in that it portrays a maximum condition.

Additionally, by the reference that follows we wish to indicate agreement with and support of the statements presented to the Task Force by ...

(a) J. R. Simplot Company (Boise and Pocatello)
(b) Monsanto Company
(c) FMC Corporation
(d) Beker Industries Corporation

Sincerely,

Leo V. Bodine
President

cc: Sen. Frank Church
Sen. James McClure
Rep. Steve Symms
Rep. George Hansen

Star Studs Co.

Division of New Idria Mining and Chemical Company
P.O. BOX 517 • AFTON, WYOMING 83110
"Every Home Should Be Star-Studded"

PLANT SITE
AFTON, WYOMING
•
RAIL SHIPMENTS
U.P. R.R. CONVERSE, WYOMING
•
TELEPHONES: AREA CODE 307
886-3144 886-3145
•
TWX 910-949-4421

September 23, 1976

Mr. Terry Narten
U.S. Geological Survey
Reston, Virginia 22092

Dear Mr. Narten:

My comments apply to the Environmental Impact Statement entitled "Phosphate Development In Southeastern Idaho".

My name is Angelo Mancini. I am the General Manager of Star Studs Co., a large sawmill located in western Wyoming.

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I am writing to you solely as a citizen greatly interested in the area I live in. I am by training a professional forester with a degree in Forest management, and advanced degrees in Forest Economics and also in pure Economics. I have had eleven years of wild land management experience with the Federal Government, and nine years of private industry experience.

This is my statement:

I am in favor of the orderly development of the phosphate resources of this area. I believe that with all the environmental constraints that are placed on any industry starting up today that any resource damage resulting will be short-lived and minimal. I believe this in spite of the Teton dam disaster. In fact, I feel that the Federal Government went ahead with their dam construction in face of overwhelming contrary evidence. If the dam had been a private enterprise the evidence would have prevented its construction, but that is another story. No company today can go out and tear the countryside apart causing irreparable damage any more than the President all by himself can declare war. There are

No response required.

Star Studs Co.

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safeguards that prevent either situation from happening.

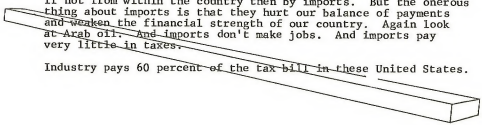
I am in favor of the phosphate development. I enjoy looking at and being in untrammelled mountains as much as any man. Perhaps more than most since my education has taught me to understand what I observe in nature. But I know that a good environment also means a nice home to live in, decent clothes, and food in your belly. And it takes a steady paycheck to do that. It takes jobs. A good environment also means having pride. And pride comes from having a decent job and money in your pocket - money that comes from working and earning it - not from getting it free from Uncle by welfare and foodstamps.

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When we tally up our natural resources we can see that this is a rich country. But surely we are not so rich that we can afford to lock up all of our resources. Each time we lock up a bit more we have the tendency to say, "Hell, this is a big country - we won't miss this little dab". But all the little dabs add up, and they all cost. That is why a single 8 foot 2x4 that cost you 30 cents ten years ago now costs you $1.50. And the same is true today for thousands of products. Like Arab gasoline - and theirs is an artificial, contrived scarcity, just as ours is where the resources have been locked away under legislative fiat. It isn't all due to inflation.

The simple fact is that there is a a demand and it will be met, if not from within the country then by imports. But the onerous thing about imports is that they hurt our balance of payments and weaken the financial strength of our country. Again look at Arab oil. And imports don't make jobs. And imports pay very little in taxes.

Industry pays 60 percent of the tax bill in these United States.



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Without this tax money we wouldn't have all the nice things that our government furnishes free to us like the wilderness areas, and national parks and national forests. Yes, and the welfare checks and the foodstamps too. And even this particular public forum.

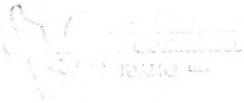
I am in favor of America and the American way of life. I am in favor of the wise utilization of our resources. A thing or a substance is not a resource until it performs a function - namely the function of satisfying mans wants. We have this neutral stuff out there in the ground now. It can go a long way toward meeting our needs, or it can be locked away untouchable for God knows how long, maybe forever. We have the ability, and the constraints, to utilize this resource today with very little long-term damage. If we have the ability to put men, and even a dune buggy on the moon, then surely we can do a little mining without turning this area into an ecological desert.

I am in favor of the phosphate development in Southeastern Idaho. I say that in wilderness is not the preservation of the world - nor of this country. Not when we have 220 million people demanding 660 million meals each day.

Thank you,

Angelo J. Mancini
General Manager

MANUFACTURERS OF PREMIUM QUALITY STUDS AND BY PRODUCTS
DOUGLAS FIR • ENGELMANN SPRUCE • LODGE POLE PINE • WHITE FIR



RESOLUTION OF SUPPORT

A resolution adopted at The Soda Springs Chamber of Commerce meeting, held September 16, 1976 and approved at General Board Meeting September 23, 1976.

BE IT RESOLVED BY THIS BODY:

WHEREAS, The United States of America imports a sizeable per cent of the raw materials from foreign sources, and

WHEREAS, recent events in international politics have shown us that a kind of dependence on foreign countries for raw materials can create tremendous problems, and

WHEREAS, private enterprise shows a desire to develop these minerals and,

WHEREAS, the tax base and employment would all be positive economic benefits to Caribou County, and

WHEREAS, the native environment can tolerate these projects with minimal degredation.

NOW THEREFORE BE IT RESOLVED, that the Soda Springs Chamber of Commerce support the phosphate mining and related industries, and urge the Department if Interior, The State of Idaho, and other involved governmental agencies to work for early completion of their analysis and favorable recommendations.

Tom Mathis President,
Soda Springs Chamber of Commerce

No response required.

National Wildlife Federation

1412 16TH ST., N.W., WASHINGTON, D.C. 20036 Phone: 202—797-6800

September 30, 1976

Mr. Glen Bradley
Acting Forest Supervisor
Caribou National Forest
427 N. Sixth Avenue
Pocatello, ID 83201

and

Mr. Herb Stewart
U.S. Geological Survey
National Center
MS 108
Reston, VA 22092

Re: The Development of Phosphate Resources
in the Southeast Idaho (and particularly
the Caribou National Forest)

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Gentlemen:

We have reviewed the Draft Environmental Impact Statement for phosphate mining in Southeast Idaho, as well as the Draft Management Plan for the Diamond Creek Planning District in the Caribou National Forest.

The National Wildlife Federation, as you know, is the country's largest private conservation organization, comprised of over three million members and supporters. It is concerned with -- and indeed its existence is premised on -- the attainment of wise use and management of our country's resources. We have some 6,500 associated and affiliated members in the State of Idaho.

The issues presently before the Department of the Interior and the Forest Service are whether to open up over 140,000 acres in Southeast Idaho, most of them public land, to additional prospecting permits, the approval of sixteen mining plans, and the execution of a group of seven preference right and competitive leases -- a preponderance in or contiguous to the Caribou National Forest.

The area under consideration is one of remarkable natural value. It is a vegetative transition zone with northern coniferous forest and southern vegetative mixtures. Because of abrupt changes in temperature, moisture, elevation, soils, and direction of slope, the area is characterized by highly diversified communities. The area supports an abundance of wildlife, including many species that are rare or absent across most of the country.

The decisions on prospecting permits and competitive leases, which involve about 125,000 acres, "are the first step in the process which eventually leads to mining, and the last step at which the Federal government has full discretion" (DEIS p. 2-1). These decisions are thus pivotal, and extreme caution is warranted. Committing that much public land to mining at this time, when major questions remain unanswered and when the immediate demand for phosphate appears not to be especially acute, is simply not justified.

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The environmental statements before us leave open many important questions. Of particular concern to us, the impact statements do not adequately address the agencies' intent, or ability, to control and mitigate adverse impacts on wildlife -- and as noted, "the proposed mining and prospecting activities and the attendant transportation will have severe impacts upon wildlife in the study area" (DEIS p. 1-373). (Emphasis ours.)

For example, one third of the 20,000 acres essential to the Elk herd in Unit 76 will be destroyed and the rest disturbed by mining. Seven known critical winter sage grouse ranges will be lost, and an undetermined impact upon sharp-tailed grouse will occur. Significant waterfowl (and there are 36 species existing in the study area) will be impacted. Canada Geese will be affected. So will the trumpeter swan, beaver, moose, deer and a host of other animals.

There are three endangered and one threatened species which may be impacted directly by mining and associated activity, including the whooping crane (for which the Gray's Lake Refuge, in the study area, provides critical habitat), the Peregrine Falcon, Rocky Mountain Wolf and the Grizzly Bear (threatened). The impact statement notes that, as to

the Peregrine, "nesting site abandonment could occur" (DEIS p. 1-381). Habitat necessary for the whooping crane "will become unsuitable once the proposed mining and associated developments take place" (ibid) -- especially, the establishment of transportation corridors.

1 In short, action at this time in granting permits, issuing leases, approving mining plans, and extending easements and licenses could run afoul of Section 7 of the Endangered Species Act of 1973, which requires Interior and the Forest Service to insure that their actions do not jeopardize the existence, or destroy or modify critical habitat, of these endangered species.

There are also other unique and nationally significant species found in the study area. All require, for their protection from adverse mining impacts, more than simply "company-proposed revegetation and fencing." (DEIS p. 1-436), and the few other measures recited at pp. 1-436 - 1-437

353 The DEIS notes (at p. 1-224) that the drainage systems in the study area "provide some of the highest quality fishing in the State of Idaho." The Blackfoot River, for example, "is one of the better known trout streams within the state." Spring Creek and Sheep Creek are "extremely important cutthroat (trout) spawning and rearing areas for the Blackfoot Reservoir" (DEIS p. 1-227). [Nowhere, however, does the DEIS give statistics on the fishery value of the Blackfoot Reservoir and River to the State of Idaho.]

The sediment loads, and the potential loss or damage caused thereby to excellent trout fishing waters in the Blackfoot River, Sheep and Diamond Creeks (which are Class I - Blue Ribbon) and Argus Creek (a Class II stream) are a principal source of concern.

2 The concession that "intensive management will be required to minimize damage" (DEIS p. 1-438) indicates a recognition of the significance of the potential adverse impacts; but provides little comfort, in terms of planned minimization of harm. While specifics of mitigation must be addressed on a case-by-case basis, the management plan can assess the total cumulative impact, and provide for comprehensive mitigation. It does not do this. cf., Forest Service Regulations 36 C.F.R. 252.8(e) requiring

1. Until critical habitats are defined in the study area, no action can be taken by the Federal Agencies. The critical habitat proposed in the Federal Register for the whooping crane involves the Grays Lake National Wildlife Refuge, which will not be subject to mining. No critical habitats have been determined for the peregrine falcon. In the EIS suitable habitat, not critical habitat, was identified. This does not come under the Endangered Species Act.

2. We agree the statement does not provide for comprehensive mitigation for wildlife. However, until the existing mining laws are changed, or industry volunteers to provide the replacement of habitat, little can be done.

mining operations to "take all practicable measures to maintain and protect fisheries and wildlife habitat which may be affected by the operations;" also, U.S.G.S. regulations at 30 C.F.R. 231.4(b) requiring mining lessees and permitees to "take such action as may be needed to 2 avoid, minimize or repair * * * injury or destruction of fish and wildlife and their habitat;" and 43 C.F.R. 23.8 (a)(6) suggesting that mining plans include "a description of measures to be taken to prevent or control * * * pollution of surface and ground water [and] damage to fish and wildlife".

The management plan is also deficient in its discussion of air pollution affects arising from the mining and transportation activities, and the four additional processing and fertilizer plants expected in the area by 1981. Already 3 inversions coupled with emissions from industrial activity in canyon bottoms have killed vegetation and have caused some damage to animal life. It appears that a number of these plants may violate both Class I and Class II air quality standards for particulates, fluorine and SO_2. (see DEIS p. 1-364).

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Both the DEIS and the management plan fail to adequately 4 discuss the value of wetlands to sediment and flood control, pollution abatement, or for fish and wildlife habitat.

Another potentially serious problem touched on lightly is the "significant impact on the ground-water system in the Soda Creek drainage basin" due to increased demand for water for phosphate processing and as a result of 5 the induced population growth (see DEIS p. 1-363). Water consumptive activities (e.g., transport, processing) directly related to mining can, of course, have major effects on ground and surface water supplies throughout the study area.

Finally, /even a strong management plan may not safeguard the terrestrial environment from irreparable damage. Phosphate mining in this area does not easily lend itself to reclamation because of the rugged land contours. While U.S.G.S. regulations may provide for "the protection of the environment during exploration and mining operations and for reclamation of lands disturbed by such operations" (DEIS p. 1-421), the fact remains that "mining has impacted 650 acres [in the Caribou National Forest] and there are 432 acres that have not been reclaimed" (Management Plan 57).

3. This comment appartently refers to the Forest Service DES on Management Alternative for the Diamond Creek Planning Unit and has been referred to them for response in their environmental statement.

4. We believe we adequately discussed the value of wetland habitat for the various species of fish and wildlife and its relationship to the proposed actions. Reference the species discussion for waterfowl, furbearers, cranes, shorebirds and fisheries. The value of wetlands to flood control and pollution abatement are not germane to the actions under consideration.

5. Water-use increase due to mining and processing, and the effect on the hydrology is discussed not only for the Soda Creek drainage basin, but also for the mining areas (DES, page 1-361) and the Pocatello area (DES pages 1-118 and 1-363).

In short, since there are extremely important fish and wildlife values that may be irrevocably sacrificed, and given other important environmental issues which have not been adequately explored, extreme care is mandated. At the moment, as noted earlier, the demand for phosphate is not particularly high in relation to the available supply. Accordingly, we do not see a clear and present need to increase prospecting, mining and processing operations -- i.e., to approve new applications for prospecting permits, for leases and for mining plan approvals. We are persuaded by statements in the DEIS and the Management Plan that mining activity must be carefully controlled; and that there is a plain necessity to more completely evaluate impacts, more fully answer questions, and to more conscientiously propose comprehensive mitigation before additional lands are committed to mining exploration and operation.

Thus, we would support a two-year moratorium on further prospecting and mining in Southeastern Idaho so that an intensive, interdisciplinary review can be launched and completed -- perhaps under the aegis of the President's Council on Environmental Quality and comparable to the effort being expended in connection with phosphate mining in Central Florida, and the Osceola National Forest.

Thank you for this opportunity to comment.

Very truly yours,

Bob Golten

Robert J. Golten
Counsel

CH2M HILL
engineers
planners
economists
scientists

29 September 1976

B010.10

Director
U.S. Geological Survey
108 National Center
Reston, Virginia 22092

Gentlemen:

Subject: Phosphate Environmental Impact Statement

CH2M HILL, a multi-disciplinary consulting engineering firm providing professional services in Idaho for over 25 years appreciates this opportunity to submit testimony on this important subject.

It is our firm conviction that the phosphate resource in Southeastern Idaho must continue to be developed for the following reasons:

1. It presently forms an important part of the Idaho economic base by providing jobs and tax revenue in Southeast Idaho.

2. It provides a significant amount of the phosphate fertilizer necessary for our national food production.

3. This important domestic source of phosphate must be maintained and protected to eliminate future dependence upon foreign sources.

We recognize and support the need for an environmental analysis and are confident the current effort will be successful. However, our experience shows that many times well-intentioned but ill-informed actions of a vocal minority are often successful in delaying and sometimes stopping work that is clearly in the public interest.

Boise Office ■ 700 Clearwater Avenue, P.O. Box 8748 Boise, Idaho 83707 208/345-5310

In regard to specific area of concern covered in the draft EIS, we offer the following comments:

1. The Land Surface will be altered by pits and dumps but well-planned reclamation efforts have been shown to be successful in restoring land to a level greater than the 50 percent mentioned. In fact, through the reshaping process it would be possible to leave the land in a configuration that is more productive than it was originally.

2. Livestock forage would be reduced during mining operations but not necessarily permanently reduced after reclamation.

3. Impacts on water quality would be minimized by adhering to Federal and State regulations on water quality.

4. We concur with the EIS conclusion that the study area on a whole will receive only minimal to moderate aesthetic impacts from the mining operations.

In conclusion, we are convinced that adverse environmental impacts can be mitigated by careful development and review of each mining and reclamation plan. This will permit development of this valuable resource in an orderly manner with minimal adverse impacts.

Respectfully submitted,

Stanton S. Nuffer, P.E.
Civil Division Manager

dw/3

1. Some reshaped configurations may leave aspects more favorable to plant growth than the original. However, reclaimed sites have to date been notably much less productive than undisturbed sites unless intensive cultural treatments such as fertilization, seeding and mulching have been used to establish and maintain the plant cover. The ultimate load of reclamation efforts has been to establish plant stands which will not require continued maintenance. In the overall, a 50 percent recovery in productivity is considered realistic unless continued maintenance is maintained.

2. It is the consensus of all specialists consulted to date that forage production will be permanently reduced following reclamation unless intensive and frequent cultural practices such as refertilization and reseeding are continued.

3. We agree. Mining operations on Federal leaseholds are required to adhere to Federal and State regulations on both air and water quality.

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LONNIE C. VON RENNER

September 30, 1976

Vincent E. McKelvey, Director
United States Geological Survey
108 National Center
Reston, Virginia 22092

Re: Draft Environmental Impact Statement, Development of Phosphate Resources in Southeastern Idaho

Dear Mr. McKelvey:

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Friends of the Earth and Defenders of Wildlife wish to take this opportunity to submit comments on the draft Environmental Impact Statement on Development of Phosphate Resources in Southeastern Idaho.

Friends of the Earth and Defenders of Wildlife are concerned with the failure of the EIS to analyze or even to address a number of serious environmental questions and thus to carry out purposes prescribed by the National Environmental Policy Act.

The federal actions contemplated in the draft EIS include consideration of mining plans submitted for existing leases covering nearly 16,000 acres, applications for preference right leases covering 2,500 acres, application for competitive leases for over 4,000 acres, and possible issuance of 98 prospecting permits which could lead to leases covering over 121,000 acres. The draft EIS states that the Secretary has no discretion to deny an application for a preference right lease, so that only limited mitigating measures may be required for mining operations on lands covered by such leases as well as those covered by mining plans. Even if this legal position is assumed to be correct, there is no question that the Secretary has full discretion in deciding upon applications for prospecting permits and competitive leases. Draft EIS 2-68. Therefore an EIS must be adequate to provide the necessary information and analysis to support exercise of this discretion. Friends of the Earth and Defenders of Wildlife submit that the draft EIS is not adequate to determine which lands should be leased. Moreover, we submit

1

1. The comments are noted. The Task Force believes that the FES is adequate as a decision-making document.

that the draft EIS is not adequate to permit informed choice of those mitigating measures which it is admitted may be imposed, including as to federal lands concerning which the decision to lease cannot be reversed.

In 1974 the Environmental Protection Agency urged the Department of the Interior to prepare a programmatic environmental impact statement which would assess the overall impact of phosphate development, preferably on a national basis. Nonetheless, the scope of the draft EIS is essentially limited to the area of specific mining activity delineated by present lease and prospecting permit applications. This narrow scope seriously interferes with consideration of such questions as evaluation of reserves on private lands as well as federal, direction of future leasing activity to areas of least environmental vulnerability, and establishment of priority areas for phosphate development.

1

The lack of information and analysis and the accompanying failure to rank areas are most clearly illustrated with regard to the threat to wildlife and particularly to threatened and endangered species from phosphate mining on federal lands. By statute, the Secretary of the Interior has a positive duty to utilize those programs administered by him to carry out the purposes of the Endangered Species Act of 1973, 16 U.S.C. 1536. The policy of that Act is declared to be "that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this chapter." 16 U.S.C. 1531. It is self-evident that this policy cannot be carried out, and the requirements of the statute met, without clear and specific information concerning the potential impacts of federal action on these protected species.

2

359

The portion of the draft EIS which purports to deal with regional impacts of phosphate mining in southeastern Idaho lists 21 species of birds and mammals which are or soon may be classified as endangered, threatened, unique, nationally significant (a category including the bald eagle), or of high public interest. Draft EIS 1-222. Yet the discussion of unavoidable adverse effects fails to consider the specific impacts on these species except to note that there will be unavoidable impacts on two endangered species, the whooping crane and the peregrine falcon. Draft EIS 1-470. The portion of the draft EIS devoted to prospecting permits, which should properly give the Secretary information on which he may take action consonant with his statutory duties under both the Endangered Species Act and NEPA, notes only in general terms

3

2. The Departments of Agriculture and Interior will administer the Endangered Species Act within the phosphate area. They are presently in a process of identifying and evaluating critical habitat for endangered species. If it is determined that those endangered species are indeed threatened by phosphate mining the Secretary of the Interior will take appropriate steps to protect them.

3. The Department of the Interior and the Secretary of the Interior will review the environmental aspects and where it is necessary to administer the Endangered Species Act, will do so. Critical habitat has not been determined for any of the Endangered Species. Until such steps are taken to assure there is no conflict with the ESA the prospecting permits will not be issued. The Secretary of the Interior will evaluate these prospecting permit applications and decide whether or not to issue them.

that in eight of the areas under consideration there would be severe impacts on wildlife, while in one of them deer and grouse populations would be "moderately reduced." Draft EIS 2-62. No information is given as to the specific areas in which the impact would fall on the endangered or threatened species or as to the species which will be put in hazard. The grant of a prospecting permit, which the Department of the Interior contends will give a nondiscretionary right to a lease, will thus be based on a total lack of knowledge regarding the effect mining in the permit area will have on species which the Secretary is directed to protect. It will obviously be impossible for permits to be granted only for those areas with the least effect on the protected species when the information to make this determination is not provided.

3

Another important subject which the draft EIS fails to analyze properly is the release through mining into air, soil, and water of a numer of toxic and radioactive substances. While the draft EIS acknowledges that such hazardous substances as arsenic, cadmium, selenium, mercury, and uranium are present in the phosphatic rock in quantities many times higher than in the continental crust, and that these substances will be released in the course of the mining and processing of phosphate ore (draft EIS 1-59 to 1-63), there is virtually no discussion of the ultimate impact this will have.

4

As EPA has pointed out, the conclusion drawn in the draft EIS that "short and long-term impacts of toxic elements are likely to be small * * * appears largely unsupported by data or by development of theoretical considerations." EPA Review of the DEIS on the Development of Phosphate Resources in Southeastern Idaho, Specific Comments, p. 4. It is beyond dispute that these substances are harmful to human health, and there is considerable evidence that long-term exposure to even low levels may cause significant damage. Some of these substances, such as arsenic, nitrates and radioactive products, are recognized carcinogens. In spite of the obvious threat an increased presence of such substances in the environment could cause to human health, no analysis is made either of the probabilities of increase or of the effect it would have. In addition, no attempt is made to analyze separately the proposed mining areas so as to determine those in which the release of these hazardous pollutants will cause the most serious dangers.

The draft EIS claims that the radioactivity released by phosphate development is not considered harmful by EPA at this time. Draft EIS 1-270. This statement is directly controverted by EPA, citing its recent study on derivative forms of

5

4. To date there has been little research and study of this important item, with perhaps the exception of the recent EPA radiologic studies of the phosphate industry. All available data to date have been included in this statement. The proposed mining areas were not analyzed separately, inasmuch as the possible impact would not differ significantly from minesite to minesite. It should also be pointed out that mining would not release these toxic materials in significant amounts above those that are now available in the undisturbed environment. The biggest concern over release of these elements is in the processing of the ore; except for radiologic elements, there are no data available from which to assess impacts.

5. On September 15, 1975, Mr. Joseph Cochran of the EPA National Environmental Research Center at Las Vegas, Nevada, stated that the limited data available indicated above-background concentrations, but that there appeared to be no health problems at that time. The text has been modified to more nearly reflect this view, and additional data made available since the filing of the DES have been included.

radioactive elements in reclaimed Florida phosphate land. EPA, Specific Comments, p. 6. These derivatives include radium-226 which has a half life of more than 1600 years and is one of the most hazardous pollutants known. Since there is a realistic possibility that water seeping from settling ponds could leach radium 226 for many years (draft EIS 1-269), we submit that far more analysis is required than the brief mention given in the draft EIS.

5

It is acknowledged that there will be a substantial increase in fluoride concentrations in the ambient air which will result in increased concentrations in vegetation. Draft EIS 1-165 to 1-170. This in turn can cause serious harm to animals feeding on the vegetation. However, no effort is made to analyze the extent of harm that may be caused to grazing cattle and other domestic animals.

6

Even more significant, there is no discussion at all of the potential harm which increased fluorides are likely to cause to wildlife. Vegetation in the vicinity of present phosphate processing plants show very high concentrations of fluoride, as well as of other harmful elements. Draft EIS 1-185. Fluorine concentrations are as much as 50 times those 30 miles away from the plants. Ibid. Wildlife is more likely to feed on vegetation closer to the plants than are domestic animals, since the mines and plants on federal lands, much of which are national forest lands, will be located in relatively remote areas.

7

The draft EIS contains a superficial discussion of the effects of mining on water supply, mentioning that there will be interruption of aquifers (draft EIS 1-347, 1-463) and potential lowering of ground-water levels and decreasing stream flow (id. at 1-348); there is no analysis of the effect this will have on present and future water users. For example, it is stated that "ground water is used in the Pocatello area for municipal, industrial, irrigation, private residence, and stock supplies." Draft EIS 1-117. Yet no analysis is made of the impact on these ground water supplies, in terms of total supply or quality, which may result from the lowering of ground-water levels or of stream flow. Nor is there any discussion of the potential effect of the combination of reduced ground water coupled with a huge increase in pollutants in the water which will obviously be less diluted than at present levels.

8

The general lack of data and analysis on such important subjects as the presence and movement of toxic elements in water, the impact on the quality and quantity of water supplies,

9

6. The text has been expanded to include additional information on this.

7. The fluoride emissions are from the existing fertilizer and elemental phosphorus plants. Since no new such plants are proposed, the effects will be limited to the present areas near Pocatello and Soda Springs where wildlife if currently limited in numbers.

8. Because the quantity of water that will be used for phosphate mining will be very small and will be from diverse areas, the impact of this water use will be minimal. The greatest impact will be from use in processing the ore. Inasmuch as all the water from the Bear and Snake River Basins - except for some parts of the flood flow - is already allocated, any new use of water from these basins will divert water from existing uses. How the water rights for the increased phosphate industry will be acquired - if at all - and where the water will come from is speculative and cannot be determined in detail at this time. The discussion of water use is intended only to delineate what the water requirements will be if the industry expands.

9. Response to the EPA comments are made elsewhere.

9 and the effect on air quality are detailed in the EPA Comments filed on July 23. In order to avoid repetition, we will simply incorporate those comments by reference here.

The failure to analyze the full effects of phosphate mining and processing inevitably leads to an extremely superficial discussion of the mitigating measures which should be required, in particular for the mining plans under consideration. Virtually no measures beyond the essential requirements of federal and state laws and regulations are
10 discussed, in spite of the severity of the impacts which could result, for example, from overflow or seepage from waste dumps. Indeed, the draft EIS admits that the designs given in some of the mining plans are insufficient to allow a determination whether dumps, pits and roads would be stable. Draft EIS 1-511.

Finally, the discussion of alternatives to the proposed actions is seriously deficient. The question whether preference right leases must, by law, be issued upon application of the holder of a prospecting permit has not been finally determined. However, even assuming that the position of the Department of the Interior in this regard is correct, nonetheless the discussion omits possible alternatives which have been presented in another impact statement on phosphate mining. In the Final Environmental Impact Statement on Phosphate Leasing on the Osceola
11 National Forest, Florida, both a cash settlement for relinquishment of options, authorized by 16 U.S.C. 1534(a)(2) for lands within national forests, and a mineral exchange which would require only issuance of a new regulation are considered as possible actions if the preference right leases were denied. Int. FES 74-37, p. VIII-4. The draft EIS rejects any denial of such leases as legally impossible and fails to discuss these other alternative possibilities. Moreover, other alternatives to mining must be analyzed even if Congressional action is required for their adoption.

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Another significant alternative, development of those phosphate resources found on private lands instead of the deposits contained in federal land, is ignored by the draft EIS. There is no analysis of the amount of phosphate which might be recovered through more intensive mining on private lands or of the differences in environmental impact which would result from
12 private versus federal land development. In view of the fact that a considerable part of the study area lies within a national forest, which was set aside for purposes other than mining, the alternative of encouraging utilization of privately owned resources instead of those on public lands should have been given particular consideration.

10. Complete engineering details will be necessary before final consideration will be given for approval or disapproval under Federal regulation 30 CFR 231. These details will be evaluated against the best engineering practices to insure stability and environmental acceptance.

11. Actions of DOI recognize the alternative to buy back the leases through legislative action, either by cash settlement or mineral exchange, where a unique circumstance warrants such action. This is described in the FES. Such settlement or land exchange, however, may require congressional action.

A preference-right lease may be denied, by using the broadest interpretation of "valuable deposits of phosphate" (30 U. S. C. 3520) to include all environmental costs, such as the costs to reclaim, restore, and stabilize the land for wildlife habitat, recreation, timber, or other land use. When these costs exceed a reasonable profit for the operator, the operation is no longer recognized as economical, and a lease may be denied.

12. Section VIII of the draft and final statements treat the matter of development of other sources of phosphate, Federal and non-Federal, in several different contexts and places, as well as the various administrative options available to the Secretary under existing law. Development of phosphate on private lands would have the same impacts as those on Federal lands; in some cases, impacts could be more severe because of lesser controls.

The National Forests are established for a variety of purposes and uses, including the development of the mineral resources, under various conditions prescribed by law.

12 In sum, the draft EIS fails to consider, adequately or at all, a large number of extremely important questions and potential impacts which phosphate development in this region will have. Until all the questions have been appropriately addressed, the requirements of the National Environmental Policy Act will not have been satisfied.

Very truly yours,

Bruce J. Terris /BB

Bruce J. Terris
Attorney for Friends of the Earth
and Defenders of Wildlife

BJT/HH

IDAHO CHAPTER
THE WILDLIFE SOCIETY

Box 398
Kamiah, ID 83536

NATIONAL HEADQUARTERS
SUITE 5176
3900 WISCONSIN AVE. N.W.
WASHINGTON, D.C. 20016

September 30, 1976

Dr. V. E. McKlevey
U.S. Geological Survey Bureau
National Center
Reston, VA 22092

Dear Dr. McKlevey:

The Idaho Chapter of the Wildlife Society has reviewed the draft Environmental Impact Statement prepared on the proposed, "Development of Phosphate Resources in Southeastern Idaho."

It is our contention that this draft is inadequate and deficient in: 1) Addressing the total impacts that the proposed mining and related activities will have on fish and wildlife resources, 2) providing suitable alternatives to the proposed action and 3) promoting adequate measures to mitigate impacts.

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1 We find a general lack of commitment by the responsible agencies in stipulating safeguards to protect fish and wildlife resources. No mention is made in the Statement as to what extent those agencies, both state and federal, will guarantee compliance with existing laws and regulations. Violations of existing environmental regulations have and are occurring, leaving us with the assumption that these actions may continue.

2 As used in the draft Statement, we feel the word "reclamation" is used improperly. Reclamation programs should be geared to the restoration of native vegetation. In many cases, exotic species have been planted on dump sites. These "exotics" do provide ground cover for aesthetics and soil stability, but do little to replace the winter wildlife forage plants that were eliminated by the mining.

3 Although it is recognized in the Statement that severe wildlife impacts will occur, no mitigative measures, except for compliance with existing laws and regulations, are proposed. The Statement fails to explore more desirable alternatives which would required changes in antiquated mining laws. The mitigation proposals fall short of protecting and maintaining existing quantity and quality of fish and wildlife habitat. Measures used to prevent losses and to replace land and habitat should be described along with the assurance they will be carried out should the proposed action be approved. The question of financial responsibility for these measures must also be explored.

1. The USGS, which is responsible for supervision of the mining activities, has committed itself to enforcement of those portions of Federal regulations 30 CFR 231 regarding reclamation. Eleven specific stipulations are listed in Part 1, Chapter IV. The Forest Service and BLM also have made commitments to these. Although other Federal and State agencies have not made formal commitments to the Task Force, many have indicated that they currently are and will continue to increase compliance with existing laws and regulations.

2. The recommended plant species suggested by the land managing agencies include native species and a few "exotic" species that are relatively short lived such as yellow sweet clover and/or alfalfa that help stabilize the reclaimed sites. In time these species will die out and native species take over.

3. These interpretative comments are noted.

4 That portion of the Statement pertaining to the transportation system is inadequate because it does not address the impacts on fish and wildlife created by new construction or expansion of existing routes. No analyses are included of impacts created by the storage of empty ore cars during the off season. Migration routes could be blocked or other wildlife problems could result. Where will the sites be and what will be the length of stored train segments?

We are opposed to any new mines opening up until all wildlife impacts are adequately addressed and complete mitigation guaranteed. We are also opposed to the construction of any processing plants within the Blackfoot River drainage unless adequate measures in construction and operation can be provided to preserve the present high level of water quality and fish habitat in the watershed.

Sincerely,

Tom Leege

Thomas A. Leege
President
Idaho Chapter
The Wildlife Society

TAL/cae

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4. The impacts of construction and expansion of transportation routes have been discussed to the extent possible at this time. Sites for storage of empty ore cars and lengths of stored train segments have not been determined, nor has a specific route been selected. The transportation route at this time is a preliminary design and is not site-specific.

Testimony given to the Interagency Task Force and the U.S. Forest Service relative to the Environmental Impact Statements on Phosphate Development in Southeast Idaho. September 7, 1976

- - - - - - - - - - - - - - - - - - - -

Gentlemen of the Interagency Task Force and the Forest Service: My name is Kay Merrism and I reside at Route three, Clearview Ave., Pocatello, Idaho 83201. My testimony today is being given on behalf of the Pocatello League of Women Voters and the League of Women Voters of Idaho, representing 500 members.

- - - - - - - - - - - - - - - - - - - -

I would like to address my comments primarily to those parts of the Interagency Task Force Environmental Impact Statement (hereafter called EIS) and the Forest Service Environmental Impact Statement (hereafter called Forest Service EIS) which pertain to the phosphate mines and related development by the Alumet group at Diamond Creek. I would like to make some specific comments on transportation, air quality, and water quality. I would also like to make a few general comments.

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Transportation: We believe the primarily proposed route through the Blackfoot Narrows to be unsound. The instability of materials comprising the adjacent slopes is not suitable for the cutting necessary for a railroad, widening and heavy-duty conditioning of the existing road, and a high-voltage power line. While the list of adverse effects in the EIS is long, there appear to be few mitigating measures which apply to the geography of the Narrows.

Also, if Alumet is to employ 160 people (4-30) at the Diamond Creek mine site, will they all drive individual cars up this road? And --- relative to rehabilitation--- will the company dismantle the railroad and the power line at the same time they dismantle the plant as stated in the EIS? Why not use use the Enoch Valley alternate route and have the employees ride the train? The League of Women Voters believes it is a waste of fuel and other resources to not consider mass transit. Perhaps the consideration of alternate methods of transportation for use by several companies simultaneously would be feasible.

1

Air Quality: Will particulate matter and SO^2 emissions be changed if fuel from the mines is used rather than coal as indicated in the original plans? (4-39, 4-28) Would dry beneficiation increase air particulate matter in the immediate vicinity of the plant? Would fluorine be a problem? According to an Alumet representative, there would be no problem because the heat used would be low, but according to pp. 1-165 and 1-166 the real problem is settling, gypsum or waste ponds. Industry

2

1. Alumet supports the SICOG bussing proposal, discussed in the FES, to mitigate transportation and housing impacts. The Secretary of the Interior and the Secretary of Agriculture can require removal of railroad and power lines located on Federal lands upon completion of mining activities. This would be stipulated if no further use for these systems can be demonstrated. This would not be the case, however, if future mining activites on adjoining leases would be facilitated by continued use of the systems.

Rail transport of mine workers to the minesites is neither an economically nor energy efficient method of mass transit because of the small number of passengers and multiple work schedules. While Alumet proposes to maintain year around rail service to the minesite, none of the other mines served by the railroad in the Dry Valley-Hooley Valley area ship ore during the winter. Snow removal costs on the EPCO spur just to transport workers would be excessive. The bus system proposed by SICOG would provide greater flexibility and fuel savings.

2. Beneficiation, as proposed by Alumet in either the wet or dry process will not produce flourine. The beneficiation will be done at about 1,400 degrees. Emissions of particulates and SO_2 will be held within allowable limits of air quality regulations. The plant will require a State permit and will be regulated by air and water quality standards.

testimony from the June 6-7 hearing said that this is not true. The League of Women Voters believes that the EIS should be more clear on this issue. If there is indeed a fluorine problem potential in Diamond Creek, it would harm wildlife, livestock, vegetation and water. What temperatures would the dry beneficiation process require? Would there be any danger for wildlife from fluorine fallout on vegetation (F.S. P 74)

2 We believe clean air to be an asset. While local air quality is now good, and according to Alumet would not be harmed (presumedly by the wet process)--- we also believe that nothing plus something does equal something: That if air quality is good and we start pouring something into that air, then that quality will change. We would encourage a concerted effort to be spelled out by Alumet for mitigation of effects upon air quality, by whatever type of beneficiation they actually plan to use. The Diamond Creek roadless area, mentioned in the FS EIS is close enough to the plant site that effects upon it must also be considered.

Water Quality: Even though Alumet now says they will not have tailings ponds with dry beneficiation, in the EIS they go into fairly explicit detail as to their potential size, number, etc. We strongly recommend that tailings ponds be regulated much more closely. Is it necessary to set aside 840 A if only 40 A is to be used at any one time? Would it be possible and feasible, to clean and re-use the 40 A ponds so that we can narrow the gap between the 112 A and 952 A (depending upon the beneficiating process)? If it is not possible to re-use a tailings pond, can that same area then eventually be rehabilitated?

3

Since, and I quote "the capacities designed are likely to be exceeded" for drainage systems, couldn't this affect both settling and tailings ponds and cause pollution of ground and surface water? How will these ponds be sealed, reclaimed, and revegetated upon completion of the mining operation? Since the EIS states that flood control measures are not adequate for extreme run-off situations, we

4 strongly recommend inclusion of provision for these extreme run-off possibilities relative to tailings and settling ponds--- with special reference to what could be done to prevent overflow and the resultant effects upon ground and surface water, and existing wells.

Diamond Creek is an important watershed. It's blue ribbon classification and its importance to the people of Soda Springs should emphasize the need for greater than usual prevention of degradation and also for highly specific mitigation measures.

5 These are not be found in the FS EIS. The Diamond Creek roadless area potential for

3. Cleaning and reusing a tailings pond is not feasible. Tailings ponds can be readily reclaimed. With dry beneficiation, the tailings will be disposed of with the middle waste shales as backfill for the pits.

4. Settling ponds, tailings ponds, drainage structures, and other physical features are designed to the best engineering standards. However, in some cases, hydrologic data are limited. Our hydrologist believes several settling ponds may be underdesigned. Modification of the design will be necessary for consideration for final approval or disapproval of the mining plan.

5. Ground-water flow will be altered locally by the backfill, but this would be of little significance. The general direction of ground-water flow in Upper Valley is parallel to the flow of Diamond Creek. However, recent studies by the Idaho Department of Mines and Geology indicate that ground-water flow at the pit site is eastward in accord with the dip of the strata. Water levels west of the pit are several feet below the valley floor; this would imply that no bogs will form.

Analyses indicate no substantial difference in the quality of water from the waste dumps and from natural sources. This would indicate that the ground-water system will not be contaminated by leachates from the backfill.

The mining plans indicate that after reclamation, runoff will be directed into the backfill via French drains. The drains themselves would not cause siltation of ground-water conduits. The backfill, as stated above, will locally alter ground-water flow, but this would not materially affect the ground water regimen in Upper Valley. Any increase in siltation above natural conditions could affect fisheries. However, if all State and Federal laws are enforced the quality of water in Diamond Creek will not be deteriorated.

The loss of vegetation will result from disturbance of about 700 acres of land.

for degradation is high---higher than most parts of the Caribou National Forest. And while it lies 3-4 miles above Diamond Valley---which should tend to minimize the effects of mining and processing on the quality of the water of the area, still there is little known about the direction of flow of ground water in that area. That, coupled with the formation of barriers caused by backfilling, raises many questions which are vague in both EIS: Will flow of ground water be altered in the area? 5. Will bogs form as the result of barriers to flow of ground water? Will ground water be contaminated by mine backfill wastes? Will French drains allow siltation of ground water conduits--- therefore affecting the direction of flow? The concomitant problems of flooding, pollution, the dewatering process, and effects upon the ground water should be more carefully explored. Will increased siltation levels affect fish spawning in Diamond Creek? What will cause the loss of vegetation along stream and river banks? (4-44) The League of Women Voters believes that these questions must be considered before mining plans are approved.

General Comments: We would recommend deferring action on the Alumet plan until:

1. Proposed plans are added to existing plans in the EIS, thereby modifying the proposal.
2. Additional data is acquired to provide an improved basis for technical or environmental evaluation. (p.1-499)

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Mineral management objectives listed on page 1-15 would indicate regulated, phased mining well below the level of development as proposed by individual mining companies. While the companies and the Task Force tell us of the need to maximize production on paper in order to meet all contingencies, and while they tell us that their plans will have little possibility of achieving these maximum levels---we recommend that 6. "regulated, phased mining" be made a stipulation in the acceptance of all mining plans.

We also recommend that the Secretary of the Interior include in the stipulations some of the costs of long-term reclamation after leases are terminated and operations cease. The costs could include road-maintenance, adjustment in mass failure of dumps, erosion problems, etc.

The League of Women Voters favors Level 2 mining (present rate) as listed on page 3 of the Forest Service EIS.

The League of Women Voters finds Plan C (page 4 of the Forest Service EIS) the least objectionable.

6. The revised mining plan for Diamond Creek is discussed in the FES, along with a summary of a detailed environmental analysis prepared for Alumet by Greiner Environmental. Several of your recommendations for long-term maintenance and phased mining are also discussed in greater detail in the FES.

6/4/76

June 3, 1976

Executive Officer,
Interagency Task Force,
Box 236
Pocatello, Idaho 83201

Gentlemen:

As an employee of F.M.C. Corporation Pocatello, I realize the importance of phosphate mining in the state of Idaho, But, I do not feel it is necessary to mine the entire Southeastern section of our state in order to supply phosphorous for the needs of the American people. I feel the present phosphate mines in operation will suffice.

Being an avid sportsman, further mining will endanger if not eliminate wildlife and fish habitat forever, regardless of what the Idaho Mining Association says. It does turn our misfortune to see what man and his polluting machine can do, even though their intentions are good. There must be a line drawn, and now is the time to do it.

Sincerely,

Mr. and Mrs. Dave Carson
726 Balsam
Pocatello, Idaho
83201

No response required.

209 So. 18th Avenue
Pocatello, Idaho 83201
June 7, 1976

Mr. William J. Schneider
Interagency Task Force
U.S. Geological Survey
P.O. Box 236
Pocatello, Idaho 83201

Dear Mr. Schneider,

I was born in Twin Falls, Idaho and have lived in Idaho all of my life, except for a year and one half in Southern California working in a defense factory and three plus years in the Navy during World War II.

Phosphate in Southeastern Idaho has been the reason for my living in Pocatello, Idaho since 1948. It has been the backbone of the income to raise my family.

First it was the original construction of phosphate plants, then the maintenance and other facets such as water and air problems that had to be solved.

Idaho has a natural resource of phosphate and some of the world's best known reserves. These reserves are where they can be mined and processed with little disturbance to the natural conditions in the State of Idaho.

Phosphate is a resource to Idaho like oil wells to Texas, California or any other place in this country. Maybe it has to be extracted from the top of the earth rather than to drill and pump. Regardless as to the nature of handling both are a necessary product in our society as we know it today.

Phosphate has a very primary function in Idaho. This is to supply fertilizer for the farm products, as agriculture is the largest industry in Idaho. Phosphates have increased the production of farmers all over the world. Without it the people would be paying a lot higher prices for food and we would have a larger segment of the people in the world going hungry. It is noted that phosphate has many other purposes in various manufacturing and other products.

It is easy to say let's not disturb our environment but I believe God put it here for our use. Let us not abuse it but let's not let a group sit back and keep progress from solving our own destiny.

Many of the people that are against any further development of the phosphate industry get their salaries from the tax dollars that the phosphate industry and all other businesses and workers pay.

No response required.

Everything that operates is based on economics and the phosphate industry is at the base to support this economy. The school teacher, the service station, grocery store, Doctor, Dentist and right down the line live off the basic suppliers. All of them better be concerned at the grass roots level if they want any similar standard of living as we know it today.

Only one group of people can print money to keep things going in our present way of life and that is our Federal Government controlled by an outside source known as the Federal Reserve System which has nothing to do with the United States but still controls our financial status. It is time for solemn decision making in this country and industry needs a chance to survive on a supply and demand basis rather than controlled by a group of politicians.

Yes, we need common horsesense and projected impact studies for a steady growth rate that is acceptable for the greatest fenefit to all the people. Cooperation among all concerned will surely be the most beneficial and keep the industry from a feast and famine situation. We have a great country and need to allow the free enterprise system to work.

Phosphate is a very needed industry and I for one want to stand up and be counted in favor of its future existance. It effects everyone in the state of Idaho and this country plus a certain amount of the total world population. Lets keep our eye on the problem!

Very truly yours,

Leo M. Knudson

Leo M. Knudson
209 So. 18th AVenue
Pocatello, Idaho 83201

195 Hoodwin Drive
Blackfoot, Idaho 83221
June 3, 1976

Interagency Task Force
Development of Phosphate
Resources in Southeastern Idaho
P.O. Box 330
Pocatello, Idaho 83201

Dear Sirs:

I was one of about twenty-five League of Women Voters from Idaho Falls, Pocatello, and Blackfoot who toured the phosphate mining area near Soda Springs yesterday.

Both sides of the picture were presented to us, first by Monsanto officials and then by wildlife representatives. I came back feeling that there must be strict control, regulation, and limitation on mining in that area before it is too late.

Seeing the huge pits left in the area to be mined more extensively in the future leaves me wondering why the more ecological plan of completely mining a pit and then filling it in should not be required of mining companies. In this manner

1. Backfilling of mined pits will be required to the greatest extent possible within reasonable limits. See page 1.423 of the DES.

complete revegetation could begin at once.

I know that there must be a balance between preservation of the environment and the need for extracting essential minerals from the earth. However, when the plans for the Alumet operation at the headwaters of the Blackfoot River were described to me, I had the strong feeling that that area should not be desecrated with mines and all that such an operation would bring into that beautiful valley.

I neither hunt nor fish, but I enjoy the magnificent scenery of Idaho and hope it can be preserved for my children and grandchildren to enjoy.

Sincerely,
Velma Brown
Member of Blackfoot
League of Women Voters

April 28, 1976

Director, U. S. Geological Survey
National Center
Preston, VA 22092

Dear Sir,

I could write volumes on what the two nearby phosphate plants have done and are doing to the quality of the life of the humanity in southeast Idaho. It is obscene.

If, in two hundred years, Americans have succeeded in despoiling our land to such an extent, I am sorry for my children and the bleak future that they might face if we continue to kill our country in the name of progress.

Idaho is about all we have left that is not spoiled by technological progress and untrammeled growth. I urge you to use your influence to help stop such planned devastation as that described in the enclosed clipping from our local newspaper.

Sir, after we use up Idaho, what is left to use up?

Sincerely,

Gail O. Clark

Mr. Gail O. Clark
74 Mountain Drive
Pocatello, Idaho 83201

No response required.

2615 Holly place
Idaho Falls, Idaho 83401
June 14, 1976

Interagency Task Force
Development of Phosphate Resources in Southeastern Idaho
P. O. Box 230
Pocatello, Idaho 83201

To the Secretary of the Interior:

Arrangements were made to testify at the June 7 Pocatello hearing. The Agency did not postpone this hearing even in the event that roads into Pocatello were closed due to the breakage of the Teton Dam. I trust my testimony will be included in the minutes of the Task Force.

My name is Mrs. Elvera Slansky, a long time Idaho resident who is very interested in both the state and federal lands of Idaho. I would like to present what I think most of the public of Idaho and particularly Southeastern Idaho would desire as a continuing quality of life for the state of Idaho. We have long injoyed a wonderful clean environment. We have long enjoyed a relative good economy. We have long enjoyed a manageable growth. We are neither rich nor poor--we have just had a good life--and most of us are very much in favor of this existence continuing as was overwhelmingly indicated recently by a series of workshops initiated by Governor Andrus on what Idahoans would like their state to be in the future.

We are now faced with a situation over which we will probably have practically no say or control. We do not wish to be inundated by an exploding industrial development. We are to have a large area of strip-mining for phosphate rock--covering 9% of our federal and state lands according to the impact statement prepared on phosphate mining in this area. The leases for these mines have already been contracted. More permits are to be issued for prospecting. We are to have polluted air, since air pollution regulations will have to be relaxed. We will lose a prime wildlife habitat. We are to faced with a tremendous influx of people that will place the burden of the serious economic impact primarily on the permanent residents.

No response required.

The fertilizer phosphate and phosphoric acid industry now uses 440 megawatts power and would escalate this amount to over 720 megawatts. These huge energy requirements bring additional air pollution and are definitely to the disadvantage of the existing energy users of Idaho, which includes the backbone of our state--the farmers. The big super users such as big industries are getting their power at below cost by being subsidized by home owners paying more for their small demands.

Hence, we as Idahoans, are being forced to subsidize the rape of our countryside for the profits of industry which intents to ship most of this material out of the United States--stated in the impact statement to be around 60%. Material that could be needed for our own use in the future will be gone forever. Unfortunately these multi-million dollar industries have very little responsibility in the areas the impact. Anyone unfortunate enough to feel otherwise is castigated and declared unprogressive and even communistic.

As to the disastrous impact on the disappearing wildlife species and vegetation according to the impact statement, this is perchance unimportant to those who are looking at dollar values--in their own pockets--but there are many of us who really enjoy awakening to the song of birds, the fresh smell of another new

day, and are actually willing to pay for that privilege. If that meant a few dollars less income, we are in favor of the less. Americans are indicating that they are willing to pay for clean air with their tax dollars; after all, we have been forced by law to pay for a lot of undesirable items we do not want, falsely justified. That is very apparent with the present despoilation of our lands by the breakage of the Teton Dam--a billion dollar damage that has ruined 400,000 acres of farmlands according to Under Secretary of Agriculture John A. Knebel.

From the impact statement we are faced with large quantities of various poisonous substances in our air, damage to our health, terrible distruction of our land and watersheds, poisoned streams, costly damage that is impossible to repair, lost of vital non-renewal resources--all for some small vague dollar advantage to a very few Idahoans.

Elvera T. Slansky

Elvera T. Slansky

2110 Bradbrook Court
Billings, Montana 59102

June 12, 1976

Interagency Task Force
Development of Phosphate Resources
in Southeastern Idaho
P. O. Box 230
Pocatello, Idaho 83201

Gentlemen:

Please consider this letter as comment upon the draft Environmental Impact Statement entitled Development of Phosphate Resources in Southeastern Idaho." I lived in southeastern Idaho for nearly 25 years and continue to have property interests there. I intend to retire one of these days and had given some thought to returning to the state where I have had such long experience, first beginning in 1936.

When phosphate mining first began in magnitude, after World War II, I saw it as a benefit. It brought jobs and money. It also brought problems. My wife developed as asthmatic condition she had never had before. We first blamed "hay fever," but the old eye, ear, throat and nose specialist, now deceased, Dr. C. W. Pond, thought otherwise. He told her business of his doubled after the installation of the two plants west of town that process phosphates. But, as I said above, phosphate brought jobs and money. Among these, mine; while I had a job before phosphate added to it and I thought it was all right.

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I made frequent trips to Wyoming on my job and after the installation at Soda Springs I saw the change in air quality. That was before we knew we had such a thing. The air in the valley southeast of Soda Springs towards Montpelier turned opaque. One got the same sharp whiff in his nose that one learned tickled his nose at Pocatello.

We ought to have learned a few things in the past 30 years.

We need to urge, through the Secretary of Interior who has the final say, that phosphate production not be increased beyond the present level, or at the most only slightly increased as true demand may develop. He can do this by approving only those mine plans that are needed to keep this level. The prospecting applications now on hand for significant new production should be denied. 1/

To significantly increase production with the present plants and new plants, with no change in methods or operations, will more than aggrevate the problems now at hand. I made personal above the asthma and breathing problems of one particular person.

1. The decision alternatives available to the Secretary of the Interior are discussed in the appropriate places.

The State of Idaho laws regarding protection of water quality and stream channels should be adhered to and the Secretary of Interior should so categorically state in final regulations. The Interior Department has shown a lamentable attitude towards states rights in these instances, as I have personally observed in the coal-strip mining regulations issued recently. These affect the State of Montana, but there are similarities between phosphate mining and coal-strip mining when it comes to maintaining water quality.

One of the charges of the Secretary of Interior has to do with his duty to protect the environment along with permitting mining and mineral development. A way to do this is to issue the kinds of permits and regulations that will cause only orderly and timely development. Mining companies, on the other hand, sense a bonanza and can be interested in only one thing--the bottom line, the net profit. The Secretary of Interior through his department is in a position to equate profit against people. The word "environment" gets the "dirty bird" award from certain of those who don't have to live in an affected region, but it's a real threat all over the West, particularily.

It's too bad about the effect on the wild life. Those who are concerned with the wild life will be looked upon in some quarters as starry eyed dreamers from the past. But the hard fact is the wild life is an indicator. Wildlife goes and the good life for people goes. Besides the loss of habitat, the increased population will mean increased hunting and fishing pressure for less wild life available. Respect for law will diminish. I know one rancher personally in the coal fields--and he has told me of others --who actually has to patrol his ranch because of illegal hunting and rustling. It's something he didn't do before. The new types involved in the construction have a minority that think this is still the open range. The same will be true in the phosphate country if it isn't already.

My wife hasn't had the asthma since she moved from Idaho to Montana. Not only are the laws on air pollution a little stricter than they used to be, they're being enforced a little better. Has that time come for Idaho? Let us hope so. Let us look at the phosphate development closely and critically...may be we can only afford as little as possible.

Very truly yours,

James Phelps

JAMES PHELPS

cc: Sen. Frank Church
Sen. James A. McClure
Rep. Steve Symms
Rep. G. V. Hansen
Gov. Cecil Andrus

Interagency Task Force. 6/13/76
Development of Phosphate Resources in Southeastern Idaho

Dear Sirs,

I would like to have the following comments included in the hearing record concerning your draft EIS "Development of Phosphate Resources in Southeastern Idaho":

While I recognize the phosphate resource is a needed commodity, I would like to see the existing environment of the study area protected as much as reasonably possible. According to the draft EIS many areas of the physical and social environment will be adversely impacted. Of those nine areas I would particularly like to see water quality and wildlife given high priority when development determinations are made. Regarding water quality; I feel that current Federal, STATE, and local laws should be adhered to by the lessees. If this is not possible, then the particular development involved should not be allowed. Regarding wildlife; I feel special care should be taken to protect the habitats of the RARER birds in the area, the peregrine falcon, golden eagle, trumpeter swan and whooping crane.

When I was younger I spent quite a few weekends in the study area, partly hunting and partly just to enjoy the outdoors. Realizing that progress must

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1. The appropriate Federal and State laws applicable to water quality are listed in Part I, Chapter IV. Lessees are required to comply with these laws. See p. 425 of the DES.

2. The habitats of rare and endangered species are protected by the Endangered Species Act of 1973 (see page 1-421 of the DES). Other mitigating measures for protection of all wildlife are given in Part I, Chapter IV.

6/13/76
PM

be yielded to, I agree that provisions for removal of "necessary amounts" should be made. Hopefully this will be done systematically with regard to environmental priorities such as I previously mentioned. With forethought to the future mental needs of myself and others, the possibility exists that the value of "natural" areas will outweigh the value of the extractive commodities in such areas.

Peter M. Mourtsen

Peter M. Mourtsen
Box 559
McCall, Idaho
83638

Mink Creek Road
Box 357
Pocatello, ID 83201
June 9, 1976

Director, U. S. Geological Survey
National Center
Reston, VA 22092

Dear Sir:

1 The purpose of the enclosed communication is to stress the importance of phosphorus in human nutrition, a consideration which was presented orally at the public hearing in Pocatello, Idaho, June 7, 1976, on the draft environmental impact statement: Development of Phosphate Resources in Southeastern Idaho.

Thank you for including these comments in the material you are gathering concerning the phosphate industry in Idaho.

Sincerely,

Patsy B. Reed

Patsy B. Reed, Ph. D.

PBR:tjw

Enclosure

1. The importance of phosphorus to plant growth is stated on page 1-1 of the DES; its importance to human nutrition has been added to the manuscript.

Patsy B. Reed, Ph.D.
The University of Texas at Austin, 1969
Biological Sciences (Nutrition, Biochemistry, Genetics)

Some Comments on the Role of Phosphorus in Human Nutrition

Perhaps one of the environments which is most critically affected by the availability of phosphorus is the internal environment of human beings. The purpose of this communication is to summarize the importance of phosphorus in human nutrition and to remind concerned individuals that the ultimate source of phosphorus for humans is the soil.

Phosphorus, a dietary essential for all ages of human beings, is the second most prevalent of the major minerals of the body. It represents 22 percent of the mineral ash or approximately 1 percent of the adult body weight. Second to calcium in quantity, it is often associated with calcium because of similarities in functions in bones and teeth and of abundance in the same food sources. Phosphorus is found in every cell, but the majority of it (80 percent) is found combined with calcium in bones and teeth. About 10 percent of the remaining phosphorus is combined with various carbohydrates, fats, and proteins, and the other 10 percent is located in special chemical compounds which play extremely important roles in human physiology.

Because the term "calcification" is used to describe the deposition of minerals in bones and teeth, many people do not realize that phosphorus is equally as involved in this hardening process as is calcium. After a bone matrix of the protein collagen is formed by osteoblasts, mineral salts are deposited to give the bone rigidity. These inorganic constituents are calcium phosphate in the form of hydroxyapatite ($3Ca_3[PO_4]_2 \cdot Ca[OH]_2$). The extent of

bone mineralization depends on the concentration of calcium and phosphorus in the blood and extracellular fluids. A deficiency of either can cause rickets in children, a disease characterized by pliable bones which bend into severely bowed legs.

The blood ratio of calcium to phosphorus is critical to the optimal use of these minerals in bones and teeth. In infancy a ratio of 2:1, that which is found in human milk, is recommended, while the ratio of Ca:P of cow's milk is recommended for older children. The Food and Nutrition Board, National Academy of Sciences National Research Council, recommends that adults consume 0.8 g of phosphorus per day, a Recommended Dietary Allowance (RDA) which equals that of calcium or provides a 1:1 ratio. This optimal ratio is maintained in the body by several control mechanisms. The hormone of the parathyroid gland influences levels of both as does the presence of vitamin D. If either mineral is consumed in excess, the excretion of the other is normally increased to maintain a 1:1 ratio. When excesses of the two minerals occur, the reserve supply is stored in the trabeculae (ends) of long bones for future use. Excretion of both occurs in the urine, feces, and sweat. An accumulation of phosphate to toxic amounts is not known to occur in normal human beings.

The presence of phosphorus in various carbohydrates indicates its importance to normal functioning of metabolism. Not only must phosphorus be present for the absorption of carbohydrates from the intestinal tract, it must be available for uptake by the cell and by organelles (substructures) of the cell. Since carbohydrates generally constitute the major source of energy

for the cell, the availability of phosphorus is indeed critical. Cells which are deprived of energy lose their organization and cease to function. Additionally, the metabolism of both proteins and fats is phosphate dependent in several aspects. Vitamins, such as thiamin (B_1) and pyridoxine (B_6) require phosphorus to be converted into their active forms. These vitamins function with enzymes to mediate various metabolic reactions. Phosphorus combines with lipids (fats) to form phospholipids which are transport vehicles for fats and which are found in cell membranes. The phospholipids of cell membranes influence the entry and exit of metabolites into and out of the cell, thus are also critical to the function of the cell.

Among the specialized chemical compounds which are phosphorus containing, one finds deoxyribonucleic acid (DNA), ribonucleic acid (RNA), and adenosine triphosphate (ATP). The unique functions and absolute essentiality of these compounds cannot be overstressed. DNA is the substance by which genetic messages are transmitted; without it no new cells can be formed, no new individuals can be produced. RNA communicates the genetic message of DNA to the system which produces protein. It is essential to protein production, therefore, is essential to the continued supply of such substances as blood cells, some hormones, enzymes, muscles, and antibodies. ATP is the substance which allows animals to trap energy and use it at a controlled rate as needed. Since animate systems observe the law of conservation of energy (energy is neither created nor destroyed but is converted) just as do inanimate ones, animals convert the energy provided in plants by the sun to usable energy. They reserve this energy in the form of ATP until it is

needed for metabolic processes, rather than allowing it simply to be dissipated as heat. If the high energy phosphate bonds of ATP were not available, the work of the body could not be accomplished.

As mentioned previously, the amount of phosphorus recommended as adequate for adult humans is 0.8 g (800 mg). Approximately 70 percent of the phosphorus which enters the body is absorbed from the intestinal tract, and this must be in the form of free phosphate. Inorganic esters which are found in food are hydrolyzed by enzymes (phosphorylases) in the digestive process so they can be absorbed. In addition, the presence of vitamin D and an acidic medium in the upper small intestine both favor the absorption of phosphorus. The best food sources are those which are also rich protein, meat, fish, poultry, eggs, milk, cereals, nuts, and legumes. If one meets requirements for both protein and calcium, one also consumes adequate phosphorus. Plants obtain their phosphorus from the soil, and animals obviously obtain theirs from plants. Thus, human beings depend on plants and animals to provide them with phosphorus from the soil. In nations in which phosphorus is abundant in the soil, phosphorous deficiencies are unheard of in normal human beings.

July 25, 1976

Dear Sirs:

As a resident of southeastern Idaho, I am concerned about the proposed increase in phosphate mining north and east of Soda Springs. Increased production will have very adverse effects on the wildlife and the quality of water in that area.

I am against any increase in phosphate production and hope that all applications for new mines will be denied.

Mrs. Donna Guilford
1820 Avalon Street
Idaho Falls, Idaho 83401

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No response required.

July 23, 1976

Director
United States Geological Survey
National Center
Mail Stop 108
Reston, Virginia 22092

Sir:

Re: Draft Environmental Impact Statement on the Development of Phosphate Resources in Southeastern Idaho

I am an ex-resident of Idaho having lived, worked, and played in southeastern Idaho from 1966 to 1975. I still own property in Pocatello and plan to retire there. I am a professional geologist registered in the State of Idaho and worked in phosphate development for nine years as an explorationist in the Soda Springs area. My Master of Science dissertation is entitled "Phosphate Exploration and Property Evaluation in Southeastern Idaho Illustrated by the Dry Valley Area." I have a strong educational background in archaeology and an avid interest in outdoor sports.

As you can see from the above, I continue to have an interest in the welfare and future of southeastern Idaho. I also have the background, education, and experience to comment scientifically and objectively on the draft environmental impact statement for the area.

My general criticisms of the draft statement as a whole are centered on the following:

1. The data used are not presented in a manner that the uninformed public can understand and assess adequately.

2. Emphasis is repeatedly out of focus with the data presented.

3. Objective data presentations are concluded with subjective summaries.

4. The impacts presented are based on phosphate production projections which are completely out-of-phase with the Law of Supply and Demand and are thereby exaggerated in proportion.

I feel that the above points must be corrected in the final statement to have a useful, meaningful and scientific document on which many major decisions must be based.

1 The entire thrust and scope of the statement, and thus the inferred impacts, are based on projections of phosphate production at rates which are totally unrealistic. The phosphate market is as volatile as the coal market and the Law of Supply and Demand will dictate future production increases. The same law will not support the production projections as presented in the statement. Even in the statement itself, there are conflicting data. For instance, Figure 1-3 negates the proposed expansion as reported in Table 1-1. Statements by the U.S. Bureau of Mines in the draft implying that the actual growth rate will be significantly smaller than that presented have been largely ignored in the draft. The USBM statements should be expanded and emphasized as such reductions in production projections will necessarily reduce the inferred impacts to southeastern Idaho and bring the environmental statement back into the realm of reality.

2 Statements implying that the imposition of additional mitigating measures constitutes the only practical means by which the adverse environmental impacts of operations could be further reduced while simultaneously maximizing the full development and ultimate conservation of the resource and allowing the lessees the full enjoyment of their rights is totally incorrect. A good rapport and working relationship already exists between industry and associated governmental agencies. The proposed imposition of additional mitigating measures warrants an unnecessary intrusion by the government into the economics of private enterprise and unnecessary interference into the natural Law of Supply and Demand which has served this nation so well.

The imposition of stipulations providing that site specific environmental analysis reports will be required before new terms and conditions are proposed for old leases and also before mining and reclamation plans for the leases are approved is not proper. These studies could be required within a specified period prior to the expiration of the lease but financed by the Federal government through funds coming from phosphate royalties.

3 The statements regarding past governmental actions on the disposition of land actions are misleading, misrepresented and in some cases incorrect. The statements lead to false assumptions by the uninformed public thereby destroying the public's objectivity in their assessment of the draft.

4 The statement "while the planning activity and its eventual land use controls are being developed these agencies continue issuance of a variety of leases, permits, and licenses" is untrue and misleading. Little or no action has been taken on anything to do with phosphate land use since 1969.

Prior to 1969 prospecting permits were issued on 60.2% of requested acreages. Of the issued permits 11.3% of the acreage was requested for Preference Right lease. This is 6.9% of the original application acreage total. During this period requests for permits were based on scientific observations and theories.

In 1973, 1974, and 1975 speculators and corporations unfamiliar with the area began making unrealistic permit applications on 173,897 acres, which is equal to all permit applications prior to 1970. In addition, 1973, 1974, and 1975 acreages include overlaps on federal leases, on state leases, and on state ground, on private ground, on areas previously withdrawn for prospecting permits.

1. An analysis of impacts at a more probable rate of production of 15 million tons by the year 2000 has been incorporated into the text.

2. Federal regulations governing mining of Federal leases require conservation, reclamation, and wise use of the resource. We can find no statements in the text which imply that additional mitigating measures are the only way of further reducing impacts. The dispositions of phosphate royalties is determined by Federal law; any change would require Congressional action.

3. The statements on past governmental actions are factual descriptions. The Task Force cannot assume responsibility for personal interpretation.

4. The statement on page 1-271 of the DES, refers to issuance of all leases, permits and licenses for grazing, oil and gas, rights-of-ways, recreation and public purposes, etc.

Table 1-3a (page 1-22a of the DES) portrays level of phosphate permit activity by year since 1960. Part 2, Chap. I lists applicants and acreages and states that amount of land made available for prospecting will be substantially reduced from that applied for. The Task Force does not believe it is qualified to assess intentions of the various permit applicants.

As a result of the data presentation with little or no explanation, the uninformed is led to the assumption that since 1970 the phosphate industry in southeastern Idaho has boomed. In general the growth rate has been a small but predictable annual percentage. The western phosphate industry has matured since
4 the middle 1960's and has largely ignored the speculator's requests for large acreage. The bulk of the acreages will be refused on the basis of infringements on the pre-existing rights of others. Much of the acreage left after the refusals should be ignored as there is no economic phosphate underlying those grounds. This must be pointed out in the final statement so the public can assess the situation properly.

The statement "within suitable mining areas, the more site specific impacts would probably increase due to larger mine pits, bigger waste dumps, and more mining development in a smaller geographic area" needs to be expanded and amplified. The reference to larger mine pits and bigger waste dumps is misleading to the
5 public because the present and probably the future limiting factor on pit depth and width and thus the waste extracted is the depth of weathering and not necessarily the strip ratio. The implementation of this type of proposal is tatamount to the nationalization of the western phosphate industry.

Several of the mentioned restrictions on additional land and phosphate development approach the ridiculous. For instance,

"Confine development of future leases to lands most suitable to mine." This is not practical as lands that are most suitable for mining do not necessarily contain phosphate.

"Possibly delay the development on existing leases located in the more remote parts of the study area not impacted by mining." This is unpractical because the remote leases have now become much more economic due to past mining and proposed future transportation routes.

"Allow, as economics dictate, the expansion of present
6 operations by adding lands to existing leases." This is not practical because land adjoining existing leases does not necessarily contain phosphate ore. Also this type of proposal forestalls unnecessarily the reaction to new economics.

"Allow prospecting permits to be offered in selected areas when geologic and mineralogic data were needed to delineate possible ore bodies in suitable mining areas." This is ridiculous and is not practical because it warrants an unnecessary intrusion into the free enterprise system and causes unnecessarily long and costly delays in the development of the industry. This also allows the government to direct the entire future plans of private industry and leads to the eventual nationalization of the industry.

5. In many areas, mining is governed by the economics of stripping ratios. Federal laws and regulations governing leasing and mining of the Federal mineral estate require conservation and wise use of the resource. Implementation of these requirements on Federal leases can in no way be construed as nationalization of the westerm phosphate industry.

6. Under the Mineral Leasing Act of 1920, and the Amended Mineral Leasing Act of 1976, the Secretary of the Interior has full discretion on restricting and/or prohibiting further prospecting and leasing of the phosphate resources in the Federal mineral estate. The Task Force believes that the alternative, as presented, is viable.

6 "Allow a restricted number of permits or leases on deep-seated deposits and suitable mining area in order to develop technology on mining methods for future underground phosphate mining." This is not practical and warrants unnecessary intrusion into reserve development as associated with a free enterprise system. Also, it subjects the industry to long delays and does not allow it to freely follow the natural scientific course of action which allows to function economically.

7 The statement regarding Webster Range north area as not being included in the original roadless area inventory is correct. The statement that it is still subject to consideration as such is not, and constitutes an attempt at intentional federal lockup of resources and thus keep all industry out of the area. The statement is subjective and misleading to the public and should be removed from the draft.

8 In general, J. Dan Powell's reserve and resource calculations are more nearly in line with private industry calculations than Leonard Garrand's. Present mining generally reaches the lower extent of the zone of alteration before it reaches the limit of earth moving economics. Powell's numbers reflect this fact while most of Garrand's do not.

Statements referring to the fact that 30% to 38% of the known reserves of the area are involved in the proposed mines as presented to the task force are misleading as they imply no improvement in processing and mining technologies in the next 25 years.

The statement that "of the resources in phosphate rock, only vanadium will be utilized" is misleading. Various companies are assessing the feasibility of recovering the rare earths, cadmium and thallium, in addition to selenium, zinc, and silver.

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Probably the most disturbing inference in the entire draft is the repeated mentioning of future underground mining in the study area. Various areas are mentioned including Dry Ridge and Schmidt Ridge. The statements are misleading to the public and do approach an untruth. In the mining plans presented to the task force, which are represented to be the aspirations of the various companies through the year 2000, the only mention of underground mining is in regard to the Paris-Bloomington Canyon area. I believe that the statements are purposely misleading, subjective, and are designed to initiate an attempt to force the operators to mine underground through the imposition of new stipulations. Therefore, all such statements must be removed from the final impact statement.

9 Statements comparing past underground mining with present open-pit methods fail to point out the changing economics which caused the switch. Such statements also fail to point out the very poor underground conditions and poor economics encountered in such operations in the Soda Springs area. It should also be pointed out that Anaconda's underground operations at Conda were used as a tax write-off for the large corporation. Comments comparing underground versus open pit mining should include comparisons of overall reserve recovery, extraction rates, capital investment, required manpower, and the relative safety of each type of operation.

7. A court order stemming from a pending lawsuit initiated by the Sierra Club and other conservation groups requires the Forest Service to identify any roadless areas of 5,000 acres or more that may have been overlooked in the original inventory and include them for wilderness consideration. The statement is correct as it stands.

8. Garrand's reserves are based on the evaluation of individual sites for their mining poential; they are the most detailed estimates that have ever been made. Even so, it is true that until each possible site is drilled, judgments of the magnitude of reserves may differ significantly.

Reserves are defined as those resources that are judged to be mineable at the present time. Resources of phosphate occur in the area that may become reserves as technologies improve.

Except for Earth Sciences, vanadium is the only rare element resource in the phosphate rock for which any company has expressed plans to us for recovery. Earth Sciences plans the recovery of a number of rare elements from the vanadiferous zone at Bloomington Canyon, as stated in Part 6.

9. It is reasonable to expect that sometime in the future when economics permit, underground mining in the Soda Springs area can be expected. Both the supervising agencies and the industries involved realize that problems encountered in underground mining such as depletion of reserves available to surface mining techniques, the lowered phosphate reserve resource recovery inherent with underground mining, the increased danger and safety aspects of underground mining, the physical characteristics of deep phosphate rock (if unaltered characteristics), etc.

It should be noted that there is no intention to "attempt to force the operators to mine underground through the imposition of new stipulations." This is clearly evident if one considers that mine plans reviewed for approval by the USGS must be submitted by the lessee or his designated operator. In no case can an underground mine be considered for approval unless a company so proposes.

References to trenching the alluvium of Diamond Creek and its possible impact on shallow ground water lead to a false impression. There is no reason to trench the alluvium because there is no phosphate present. The statements should be removed from the final document.

10

The statement regarding the fact that exploration drill holes will drain perched aquifers, artesian aquifers, allowing them to flow free and allow inter aquifer flow is a misleading statement. Operators are now required by law to cement all drill holes from bottom to top.

The statement "unless topsoil is salvaged, the mining and associated construction activities transportation networks will result in the destruction and mixing together of all the existing soil types and horizons on a total of 11 9700 acres" should be emphasized and expanded as this represents less than 1% of the study area. The inference that micro-organisms and soil relationship have been established over a long geologic time span is incorrect as the time span on a geologic time scale is miniscule.

References to the fact that the study area as a whole will receive only 12 minimal to moderate aesthetic impacts should be expanded, amplified, and expressed in terms that the general public can comprehend.

Much of the data presented is used in a manner that the general uninformed public cannot understand. The implications referenced in the discussion on construction of waste dumps should contain viable alternatives. For instance,

Waste dump slopes at the maximum ratio of 3:1 will neces-
sarily cover too much ground as compared to a slope of 2:1 which,
when properly constructed, will not errode. Construction of waste
13 dumps in horizontal layers of 12" or less is impractical if not
impossible. Construction of waste dumps with horizontal layers of
5' to 10' is more practical. Brush barriers used as sediment traps
are physically unsafe and have short lives.

References regarding Ballard Mine fail to clarify that 85%
14 of the disturbed lands have been reclaimed with efforts continuing
on the remaining 15%.

Regarding statements to reclamation efforts at Conda, the
15 emphasis is misleading and should point out the total reclaimed
land as a percentage of total disturbed.

10. Submitted plans indicate that alluvium along Diamond Creek will be increased to a depth of 125 feet. Recently available data indicate that the water table may be as shallow as 10 feet in the alluvium. Under these conditions, the impact on the shallow ground water could be very significant. The statement regarding exploration holes has been deleted from the text.

11. The Task Force believes there is sufficient emphasis. We state clearly that 9,700 acres is less then 1% of the study area.

The word "geologic" has been deleted.

12. The general areas impacted are described on page 1-416 through 1-418 of the DES. The statement on page 1-419 of the DES is a summary statement of these three pages.

13. The constraints on building of mine dumps are aimed to fulfill, in the shortest possible time, four objectives all of which are to some extent inter-related and interdependent. These are: (1) to form a physically stable structure, (2) to minimize erosion and consequent degradation of adjacent areas and water quality, (3) to establish vegetative cover for forage and wildlife habitat, and (4) re-establish, as far as practical, the aesthetic values of the area. The alternative methods of accomplishing these objectives are many and varied and depend upon factors of geology, topography, aspect, and type of mining equipment available. The manner in which these objectives are accomplished is of little consequence. Brush barriers have been found safe and to a degree, effective sediment traps for controlling heavy sediment loads from waste dumps prior to final shaping and establishment of vegetation cover. The fact that these barriers decay in a few years after accomplishing their purpose is a favorable feature.

14. It is not true that 85% of the disturbed lands within the bounds of the Ballard Mine have been reclaimed. Perhaps 85% of the waste dump areas have been reclaimed. However, with a few exceptions, the pits at the Ballard Mine remain open to this day. These pits represent at least half of the total disturbed lands within the mine area. Certainly reclamation of mine waste dumps is better than none at all; however, the now open mine pits will remain visible for hundreds or thousands of years to come. A viable alternative, and one that can be understood by the general public, would be to backfill the Ballard Mine pits. A viable alternative in the construction of waste dumps would be building an angle of respose dumps which would backfill the pit and have no possibility for off-site damage since any dump failures would be contained within the limits of the pit.

15. Until recently, the majority of mining operations at the Conda Mine have been confined to waste dump and pit locations on privately patented claim lands. On such lands both the surface and the mineral are owned in fee simply by the company. Excellent reclamation success has been achieved especially south and east of the townsite of Conda.

16 Statements regarding face of waste dumps between benches are not expressed in normal industry usage and are misleading.

17 Should be pointed out that 47 1/2% of the disturbed acreage at the Henry Mine has been reclaimed as existing statements are misleading.

Recent phosphate rock production operations have been from Federally leased lands. In general, very little reclamation has been performed on the east Woodall area, Federal lease I-04494. The Federal government has no jurisdiction over pits and/or waste dumps located on lands other than Federal surface or mineral. Therefore, no information has been supplied by the company pertaining to the percentage of total reclaimed land as a percentage of the total land disturbed. It should be noted that the state of Idaho does have authority to approve or disapprove all mining activities within Idaho.

16. Basically, this is correct. Mine plans received at the Pocatello District office have had waste dump slopes expressed in ratio, percent, and degrees. It is understandable that this could confuse the lay public. However, it has not caused any difficulty in evaluating the mine plans for review.

Standardization along this line would be preferrable. Common practices amoung the older mining companies in the southeastern Idaho area are to express waste dump slopes in ratios (e. g. 3:1) and the slope on mine pit highwalls in degrees (e. g. 45°).

17. This comment is apparently based upon information that neither the USGS nor the Monsanto Chemcial Company has at hand. According to Monsanto mine superintendent, the 47½% reclamation figure is an over estimate. It is likely that the percent of the land reclaimed at the Henry Mine is on the order of 10%.

17. Irrigating during initial rehabilitation planting periods is not wise as it will place a greater demand on available water. Proposed relocation of mine dumps on "critical wildlife habitat areas" ignores data in Wyoming that deer and grouse populations have increased in areas of rehabilitated mine dumps.

18. The planting of trees and shrubs about 50' from the highway to help recover some wildlife habitat lost with highway development will increase visual impact and reduce the visual aesthetics of the area.

Construction of fences, underpasses, bridges, and other structures to facilitate big game movements is ludicrous, I feel.

19. The proposed relocation of mine dumps covering or interfering with streams is not always practical and should be discussed on a case by case basis rather than being covered by a blanket statement.

20. "Unavoidable slumping waste piles could result from stong earthquakes." This is true, but natural mass movement during such periods will be many times greater and it should be described as such.

21. The statement "partial backfilling of some pits with waste rock would adversely affect the possible future recovery of addtional ore-grade phosphate resources that extend downdip from the bottom of the pits," is true, but provides a good compromise between preservation and conservation from mineral economic point of view and should be expanded to explain this fact.

22. The statement that the creation of lakes, ponds, and pits of water created at the completion of mining will be adverse to the extent that it depletes streamflows is misleading as this is only a short-term depletion lasting no more than one year.

17a. It is true that the mean flow of the Blackfoot River is fully adjudicated and some of the flood flows of this same river are also appropriated. New uses of water must either not compete with existing uses, or water rights must be purchased from existing uses. Since this area is an organized mining district, the discussion on page 1-155 of the DES should apply and if negotiations between buyers and sellers of water rights can be completed, then the diversion of water from existing uses for mining purposes is entirely within the realm of possibility. No condemnation is discussed and is presumably not available so such a diversion or change of water use would necessarily involve a willing buyer and a willing seller. In the open market place then the water would be used where the return on investment and value are the greatest.

18. We agree, but only to a very limited extent. It is not the intention to plant trees and shrubs that are not endemic to the affected site. All plantings would be such that they will blend with the natural setting.

Proper planting of indigeous plants would restore the land to a more natural setting and through proper selection would decrease the visual impact and help restore the visual aesthetics to the area. Seeding with native grasses would abate erosion and would be compatible with shrub and tree planting.

18a. It would be desirable to avoid land use changes and man-made barriers associated with phosphate mining. If, however, barriers and conditions are created that obstruct and otherwise interfer with big game movements, it may be necessary to construct underpasses and other structures that will minimize these impacts. Admittedly, these measures are not always successful or only partially successful but every effort must be made to preserve traditional migration routes.

19. Any proposed mine dump which would cover or interfere with a perennial stream would be examined in great detail. It should be noted that the Idaho State Stream Alterations Act requires a permit from the Idaho State Department of Water Resources prior to any activities which would interfere with a stream course.

It may be that an alternative location cannot be found so that the waste dump will not interfere with a perennial stream. This could result in the disapproval of a mine plan. As is mentioned in this comment, any situation along this line will be examined on a case-by-case basis, as are all the mine plans submitted for approval.

20. This is so stated on page 1-50 of the DES.

21. Additional references to backfilling of pits are made on page 1-340, 1-341, 1-423 and 1-424 of the DES.

22. We disagree. Although the initial extraction from runoff to fill the lakes and ponds are short-term, evaporation from the water surfaces will be long-term, albeit small.

With regard to impacts on water quality the draft continues to mislead the public on the basis of little or no data and false assumptions. The statement that possible encounter of carbon dioxide discharged waters may preclude development of parts of the Chesterfield and Reservoir Mountain areas is unfair. The statement that water beneath the Blackfoot Lava Field could easily be contaminated by such waters is misleading. This type of flow from the wells on lease I-013215 had no significant effect on ground-water as monitored in nearby wells. Furthermore, evidence indicates no effect will be placed on the Blackfoot Lava Field ground-
23 water table. It has been proven that wells of this type can and should be plugged. However, the problem can be controlled from the beginning by drilling measures and certain proven precautions.

Statements regarding high pressure carbonated water contaminating local water supplies due to lowering of water levels and reversal of natural gradients are misleading. The situation is extremely unlikely to develop as the carbonated water is less dense than the upper fresh water. Hence if communication were to be established, the evidence of such communication would already be observable.

"Assuming that the impact increase in suspended sediment concentrations in the proposed mining area might also be about tenfold, the natural variability of suspended sediment is such that as the impact occurred to a naturally "clean" stream the net result would be a stream no more laden with sediment than a naturally "dirty" stream." Logic in this statement is incorrect and the terms "clean" and "dirty" are ambiguous and subjective and mislead the public. The paragraph should be reworded ("cleaned up") or removed.

23. The statement that possible encounter of carbon-dioxide charged water may preclude development has been deleted. The statement that water beneath the Blackfoot Lava Field could easily be contaminated does not necessarily relate only to carbon-dioxide charged water: the fractured, porous nature of the lava makes it particularly subject to contamination from any source from the surface or from underground movement of contaminated water as is stated on pp. 1-132 through 1-137 of the draft statement. Evidence that there is communication between the formations containing carbonated water and the local water supplies is already evident. Dion (1969 p. 35; see reference in DEIS) states "Many of the wells near Soda Springs contain water that is high in magnesium bicarbonate and that chemically resembles the water from carbonated springs in the same area." Page 1-150 of the DEIS states "The generally high concentrations of calcium and combined carbon-dioxide in the groundwater of this area (Conda-Soda Springs) indicate that much of the water is at or near saturation with respect to the calcium bicarbonate minerals calcite and arogonite."

In view of this, any lowering of ground-water levels in this area could induce more upward movement of carbon-dioxide charged waters.

"Most likely then, if adequate mitigating measures are provided and enforced, impact on most stream channels would be within limits of natural variability. Except for temporary and localized instances, increased values 24 of suspended sediment concentration could be held to natural, or at least acceptable, limits." This is an accurate statement but should be emphasized and amplified.

Statements that saline water could be diverted into new drainages in the Webster Range South area are misleading as there are no known saline water occurrences associated with phosphate deposits or in future mining areas. 25 The statement leads to false impressions and assumptions. It is noted that saline spring deposits emanate from thick salt beds of Jurassic age and are not associated with phosphate deposits of Permian age.

The statement ". . . additional large withdrawals of water could lower ground-water level and decrease the flow of the numerous springs discharging 26 into the Portneuf River below the Pocatello plant sites" is erroneous because most of the larger springs have recharge areas in the opposite direction from the plants. Future withdrawals will not likely affect the springs.

The statement that "mining along the west side of Wilson Ridge and west 27 of Lanes Creek may reduce the flow of springs" is incorrect and misleading as available drilling data show there is no mineable phosphate near the major springs.

The construction of wind barriers to control fugitive dust emissions from ore stockpiles is not practical, not feasible, and uneconomic due to the high wind velocities in the study area. Statements regarding control of fugitive dust emissions from present mining activities imply that current methods of control are adequate. This should be emphasized, clarified, and 28 expanded.

For instance it would be simple enough to expand the following statement and put it in terms the general public can understand. "Qualitatively uncontrolled particulates emissions from phosphate mining are believed to be about 0.5 lbs. per ton." This amounts to throwing a 5-gallon bucket of rock into the air every hour at a mine of 2 million tons per year capacity.

The section of the draft on transportation, I believe, is the best in the entire work. Planned population dispersal and mass transit systems are good ideas. Funding of these programs should come by increasing the refunds of 29 phosphate royalties to the state to 50% and utilize these monies for planned regional development. These funds should be placed by the state into a trust fund specifically for financing the problems of the affected counties.

24. The Task Force believes that the statement as presented, with antecedent discussions on pages 1-350 through 1-352 of the DEIS is adequate.

25. Applications to prospect the Salt Springs area along the east side of Crow Creek in the east half of T10S R45E have been received (see Fig. 2-9, and Map 2 of the DEIS). Jurassic formations containing the salt beds are extensively exposed in this area. Test drilling or trenching in this area could result in movement of saline waters.

26. The statement is correct as it stands.

Plates land 5 of USGS Water Supply Paper 1846, and Plate 4 of USGS Water Supply Paper 1654, show ground-water flow directly from the plant sites toward the reach of the Portneuf River containing the several large springs. Also, the more detailed water level data used to prepare figure 1-17, page 1-117a of the DEIS indicate that the springs are discharge points for water moving north and northeast from the plant-site area. Plate 5, WSP 1846 indicates clearly that recharge takes place in the plant area. Large withdrawals in the plant area and/or just east of the airport water gradient toward the springs, which in turn, will decrease the spring discharge.

27. The statement has been deleted.

28. We concur that wind barriers around stockpile are not practical; this has not, however, been proposed as a mitigating measure. Inasmuch as the comparison is stated above, we see not need to expand the text accordingly.

29. The recent Federal Amended Mineral Leasing Act of 1976 increases the State share of royalty resources to 50 percent. Legislation recently enacted by the State of Idaho transfers 10 percent of the State share to the affected counties. These recent laws enacted after the filing of the draft statement, have been added to the text.

30. Of the four alternative transportation corridors offered in place of the Union Pacific corridor — only alternative #3 is viable. The best transportation corridor proposed in the draft is that presented by the Union Pacific, as it allows flexibility and will handle all possible future expansion.

31. The projected population distribution by the Pocatello and Marsh Valley school districts projected at 90 to 10 I feel is incorrect. A 75:25 ratio is more likely due to work locale, available water, housing space, and transportation systems.

32. In discussing the impacts of mining on ranching and wildlife the data used should be expressed in terms that the general public can understand. For instance,

> In 1973 within the study area provided forage for 103,000 head of sheep an average 1 3/4 months; provided an average 3 1/2 months grazing for 12,500 head of cattle; averaged 2 1/2 months grazing for 182 horses. The numbers should be expressed as such rather than their present form.

33. The 2000 head of cattle on which flourine settlements have been made is spread over 25 years and represents only 1.3% of the cattle in the study area in the year 1969. What part of the cattle industry has been affected by the need to reseed, eradicate brush, and construction of fences and watering facilities because of phosphate processing? These are the questions that arise in the general publics mind and need to be answered.

34. It should be emphasized in the discussions centering on wildlife that the whooping crane is not indigenous to this area and was introduced by man in 1975 and thus should not be considered in discussions of mining impacts.

35. The statement that construction of transportation corridors will affect the migration of big game is misleading as migration occurs during the season when the railroad will not be used.

Implications that half of the deer that winter in the Soda Springs area will be affected by the construction of the transportation corridors is not true. Previous statements in the draft admit that deer still migrate across State Route 34. Also, migration occurs at times other than the shipping season.

36. Statement that the loss of winter range for 300-400 deer in the Georgetown Canyon area is misleading and probably not true. There is no mention of mine plans or transportation routes in this area. The statement is misleading and does not belong in the final document.

Statements on the degradation of the Georgetown Canyon area caused by phosphate operations are misleading as they fail to state that the area during and after mining remained an important deer winter range and still offers excellent hunting.

30. We disagree that alternative 3 is the only viable alternative. All of the alternatives are variations of the proposed network and represent varying degrees of operational efficiency and environmental impact. Present rail service to the Wooley Valley and Maybe Canyon mines provide adequate means of ore transport without optimum operational efficiency. Development of any of the alternative railroad networks would accomplish no less. The final decision regarding the railroad system that best serve the mining operations will be based on a full assessment of efficient operation, flexibility, and economics weighed against environmental impact.

31. New methology has been used to revise population employment and school involvement impacts. The combined efforts of Southeast Idaho Council of Governments and the Government Research Institute of Idaho State University have produced a computer forcasting model - Interactive Population Employment forcasting (IPEF-73) which has been calibrated with each of the seven counties data in Southeastern Idaho. The new results have been included in the Final Environmental Impact Statement.

32 & 33. Reference to the use of the term AUM could be changed as proposed, but the real issue is how much forage has been consumed. With regard to the question on fences and watering facilities, the comment apparently assumes that all the mined area, dump sites, etc., were grazed by cattle prior to mining. This is not true since most mining has occurred in higher elevations in areas devoid of water and normally not grazed. The losses to flourine were from processing, not mining.

34. The fact that whooping cranes are an introduced species is clearly stated on page 1-224 of the DES. Since they are now in the area and are protected by the Endangered Species Act of 1973, their consideration is germane to discussion of mining impacts.

35. The major impact of the transportation corridors on big game migrations in the area will be the associated cuts, fills and fences. The construction of the highway between the Sublett Mountains and Black Pine Mountain in south-central Idaho has resulted in reducing the number of migrating deer from 1300 to fewer than 300 in a period of 5 years. From present data, few or no deer will be using this migration route in the next 2 to 3 years. The fence constructed along this route is only 42 inches in height. Therefore, with the construction of two or more transportation corridors across big game migration routes, it is certain that some effects will occur to big game in the phosphate mining area. Wildlife biologists estimate that this will affect about half of the deer that winter in the Soda Springs area, either directly or indirectly.

36. The estimate of lost winter range is probably conservative and the number of deer affected could be even higher. Georgetown Canyon is extremely narrow and steep. Mining and other human activity or land alteration will have an immediate affect upon deer due to the concentration of deer in a very limited area.

We do not believe the statement is misleading. Many acres of winter range has been taken out of production by the present roadbed and the associated cuts and fills. The railroad bed also has removed an area from production and required additional encroachment on the winter range.

37. The statement that transportation corridors will displace about 30 moose that migrate through the area is ridiculous. Moose go where they want to, when they want to, and don't care who or what is in their way.

38. Statements regarding the loss of animal unit months of feed should be clarified. The 4100 animal unit months which may be lost over a 25-year period amounts to only 1.8% of the total 1973 animal months. It should be pointed out that the 40-60 acres of dry-land crops unavoidably lost to mining amounts to only .013% of the total.

39. The statement that "fifty years or more of plant succession will be required for these areas to return to their present state because the existing soil structure and microclimate will have been changed" is inconsistent with previous data which stated that the length of time was unquantifiable.

40. "Insect and disease problems in the study area are small. Spruce budworm has been observed in the Douglas fir, but only in small groups of mature stands. There is some mountain pine beetle activity in the lodgepole pine stands but it is not prevalent." I believe this to be incorrect. By personal observations up to 30% of some lodgepole stands are dead due to beetle activity.

I also object to and disagree with several statements associated with inferred impacts on archaeological and historical sites. "The Oregon and Lander Trails shall be protected and opportunities for their adequate interpretive development preserved." I disagree with this statement. Also, I disagree with preservation at all costs because ruts in the ground provide no interpretive value.

41. The statement that none of the proposed mine sites will not encroach on the 92 aboriginal sites or any of the historic sites as designated by the Idaho State Historical Society should be emphasized.

Statements referring to the lack of systematic archaeological or historical search and implied damage by phosphate mining are misleading. Most sites are on natural migration grounds and thus are out of harm's way. Inference of petroglyphs at any of the mine sites is wrong because of the location, rock type, and lack of available camp sites or shelter.

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37. As accurately as we could determine the number of transportation corridors per unit area within the principle area occupied by moose would ultimately lead to the displacement of approximately 30 moose. The proposed railroad, roads, conveyor belts, cuts and fills plus fencing would pose considerable barriers to moose. Added to this the increase vehicle access and use into areas where little or no access currently exists, all indications are moose will abandon their existing migration routes. According to wildlife biologists on the Task Force, the proposed increase human use (railroads, automobiles, ore trucks, increased recreation use by more people, etc.,) would exceed the behaviorial tolerances of moose to this type of activity.

38. The Task Force feels that the figures as stated in the text are accurate and sufficient. We are unable to develop the same percentages from our data. We do agree however, that the amount of forage lost from this particular source is not a large portion of the total amount of forage available or lost.

39. The Task Force agrees that the precise length of time to accomplish plant succession cannot be quantified. The reference to fifty years is intended to convey an estimate of minimum time.

40. Mountain pine beetle are active in some mature pine stands as observed, but the stand of lodgepole pine over much of the area are younger trees which are not susceptible to damage.

41. The Oregon and Lander Trails have been included in the National Register of Historic sites and have been recommended for inclusion in the National Trails System. Under provisions of the "Act for the Preservation of American Antiquities," approved June 8, 1906 (34 Stat. L., 225) and Idaho Senate Bill No. 163 which provides for the identification, preservation, and protection of historic and archaeological sites within the State of Idaho for the appropriate marking thereof, and for penalties for damage thereto, steps must be taken to protect these trails and adequately interpret their development. Pages 1-453 through 1-455 of the draft statement covers the laws and requirements for preserving cultural resources. We find no reference to preservation at all costs. The value of the ruts and other improvements found along the trail routes is expressed the following statement taken from the Lander Trail Report, prepared by Dr. Peter Harstad, Idaho State University and Mr. Max Pavesic, University of Colorado, dated 1966:

> " A significant and dramatic aspect of the American heritage is uniquely preserved in the Bridger and Caribou National Forests in the form of a 19th century emigrant road, portions of which have changed little since the last emigrant wagons rolled westward early in the 20th century. This heritage becomes more and more valuable as time and technology propel American society away from its frontier origins. Damage to this heritage is irreparable; the historical heritage is an unrenewable resource."

In the pictorial section, views are exaggerated because they are not taken from vantage points frequented by the majority of the general public. Photos should be included that show the areas as the general public will see them.

42. Picture 1-34 is totally incompatible with the study area and its inferences to impacts by phosphate mining are misleading.

Figure 1-36 I believe is purposely misleading and should be removed from the final document as it is in no way characteristic of the study area.

Sincerely,

J. S. Spalding
101 Munson Drive
Beckley, West Virginia 25801

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The impact to cultural resources within the study area can not be fully evaluated until a detailed inventory and analysis has been conducted for each area.

Many impacts will be off-site from direct mining and exploration areas and related transportation and utility systems, waste areas, etc. At this time, "out of harms way" has not been identified.

42. The photos of mining operations show the physical impact of mining. These physical impacts exist, regardless of whether they can be seen by the general public. Figure 1-34 represents an actual mining operation. It was selected from photos which showed a range from greater to lesser visual impact. Figure 1-36 portrays the historic rural character of the area, as stated on page 1-332 of the DEIS where the figure is referenced.

4000 4th Avenue, North
Great Falls, Montana
59401

Interagency Task Force
Development of Phosphate Resources in Southeastern Idaho
P. O. Box 230
Pocatello, Idaho 83201

July 29, 1976

Dear Sir:

This letter refers to the DEIS regarding phosphate leasing in southeast Idaho. Please make this letter part of the hearing record. It is my understanding that there has been an extension of the comment period.

I support deferment of all new lease applications with new requests being granted only as needed to keep production stable, not increasing. The Department of the Interior has the responsibility to 1) ensure an orderly and timely method of resource development, 2) protect the environment, and 3) ensure the receipt of fair market value for disposition of the mineral resource. None of these responsibilities can be met if the Department continues its policies of 'automatic approval' of mineral lease applications. It is clear that only when the government controls the number of leases allowed will stability come to the mining industry. The mining industry has repeatedly shown its lack of concern for anything but profit leaving the public to bear the costs of their ill-planned attacks on the geologic phenomena of our planet. There are no other alternatives to wise land use planning. I urge you to recognize this point and defer the leases.

No response required.

Sincerely,

Thomas E. Horobik

Thomas E. Horobik

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817 River, #5
Coeur d'Alene, ID
21 July 1976

Director,
U.S. Geological Survey
National Center
Mail Stop 108
Reston, VA 22092

Dear Sir,

I am writing this letter as a comment on the Draft Environmental Impact Statement entitled "Development of Phosphate Resources in Southeastern Idaho."

Before reading the Draft EIS, I was opposed to the mining and now, after reading the statement, I still am, and for several reasons.

I have lived in southeast Idaho for eleven years, and I really enjoy having areas nearby where I can get away for a weekend to camp or ski. The mining would destroy alot of these areas.

The mining would also destroy a lot of prime wildlife habitat and displace a lot of wildlife. This is another facet of southeast Idaho that I really enjoy.

Reading the statement does sometimes like reading an epitaph for the area. I appreciate the mitigating measures and the fact that the mining will take place over a 20 year spread, but I don't feel that will adequately make up for the wildlife and scenery lost. It will not make up for the high [illegible]

No response required.

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press of much of the soils to be mined or the air and water pollution from the mining or the gasoline and other natural resources that will be permanently lost due to mining activities and never recovered.

Sincerely,
Robyn Lea Willey

USGS Director:

The devastating effects upon air and water quality forage productivity, energy demand, local socio-economic institutions, aesthetic and recreational values and wildlife populations predicted in the DEIS for Idaho phosphate development are unacceptable. Severe impacts upon threatened and endangered species in the area must especially be avoided. All possible mitigating measures must be used, including deferred action, alternate plantsite location and increased environmental restrictions on all operations. Thank you. John Ball

1

No response required.

2453 Mars Street
Idaho Falls, Id. 83401
August 27, 1976

Interagency Task Force
P.O. Box 236
Pocatello, Idaho 83201

Dear Sirs:

I wish to go on record as being strongly opposed to the proposed radical increase of phosphate strip mining in South East Idaho. I have studied the pros and cons, toured the area involved, and am convinced that any increase beyond the present rate of production of phosphate is entirely unnecessary and will create irrepairable damage to the area and its wildlife just for a quick profit by a few large firms. Idaho and its people will be the inevitable loosers.

Sincerely yours
Waldo G. Hill

No response required.



I do not wish to see south eastern Idaho torn apart because of a stupid phosphate mine.

Ward Dorvey
893 E 13th
Idaho Falls, Idaho

No response required.

Interagency Task Force
Development of Phosphate Resources in Southeastern Idaho
P.O. Box 250
Pocatello, Idaho 83201

Dear Members of the Task Force:

Enclosed is a shortened version of my statement on the proposed phosphate development in southeastern Idaho. I gave this statement at the earlier hearing in Pocatello on June 7, 1976.

I am very concerned about this issue and am in support of EPA's recommendation that separate environmental supplements be prepared for each mine and processing plant as sufficient information becomes available.

I feel that the final decision needs to be delayed until many questions recently asked by the EPA are answered.

Sincerely,

Karen Swafford

Karen Swafford
1045 Cathryn
Idaho Falls, Idaho 83401

Shortened version of statement delivered at hearing in Pocatello on June 7, 1976

I would like to thank the Task Force for the opportunity to give my opinion regarding the proposed phosphate development in southeastern Idaho. But I also must criticize them for allowing such a brief period of time for public input on a statement that took them almost two years to prepare. One wonders if they are truly interested in getting public opinion. The public should be actively encouraged to give opinions, but the Task Force has given only minimal news coverage of the statement and of their intentions.

The following comments apply equally to both the Task Force's Environmental Impact Statement and to the Diamond Creek Planning Unit.

First, we must consider that phosphate is a non-renewable resource. Our record of past use and management of non-renewable resources shows that we have failed miserably to foresee their depletion; so we must move carefully and conservatively when considering the use of such. Therefore, we cannot look at jobs or economic gain as the criterion for developing and using such a resource.

We also cannot go around creating jobs without looking at the activity of the workers. Does it provide a useful service - something we need? Does it deplete the resource in a wasteful manner? Does it change the lifestyle of the people around which the work takes place? If we used jobs and economic gain as the main criterion for opening up new development, it would often result in wasteful, irrelevant and even destructive activities.

Second, we must consider the reason for the proposed increase in phosphate mining. There is only one criterion we can use for evaluation of an activity that would be as severe in its impacts on our way of life as the proposed phosphate development, and that is the issue of need - a clearly defined and critical need for the products of the mining.

1. Many of the issues raised involve National, State, and local policies which are beyond the scope of the EIS; some relate to and are addressed in Chapter IV, Mitigating Measures, and Chapter VIII, Alternatives, of the Regional Appraisal (Part 1) to the extent possible where germane to the requirements of NEPA.

Are we sure the amount of phosphate fertilizer being applied to a particular field is the minimum amount needed to get the optimum yield from that field? When mining companies see the large profits to be made from selling phosphate fertilizers, are we sure they are not employing salesmen to create the increased demand for their product? I speak mainly about phosphate fertilizers, as that represents the largest use of phosphate rock - being 84% of all phosphate produced in this country in 1975, according to the Idaho Mining Association.

This is an interesting issue in light of the following statistics: This quote is taken from Science Magazine, November 2, 1973. The article was entitled "Food Production and the Energy Crisis". Between 1940 and 1950 the use of chemical fertilizer increased 129%; between 1950 and 1960 the increase was 69%; and the decade between 1960 and 1970 saw an additional 113% growth in fertilizer use. Today the average American farm uses almost as much energy in the form of fertilizer as it uses to operate all its tractors." Was this quick increase really necessary, or the result of mining company salesmen creating a need for their product?

Many of the residents of Idaho have come from other eastern states, they don't take Idaho's environment for granted.

And yet we have people at these hearings saying that it is allright to degrade these high qualities if they can have more money in their pockets because of it. We have to look carefully at the motives of every speaker at these hearings. What are the motives of the mining industry and the members of Chambers of Commerce and other businesses? What are my motives here tonight? I have no financial gain to be made by what I say.

Another issue: Where does the food go that is produced on our land? We must get into the issue of our use of food, the amounts we eat, and the amounts we waste. There is a lot of waste in restaurants, in grocery stores, and in all large handlers of food. If we didn't throw any away, if we ate smaller amounts, a given amount of fertilizer would feed many more people. If the choice is that by protesting wasteful practices, and being wise with our use of food, we could keep more of our wildlife, and keep our natural environment the way it is now, then many of us are willing to do so.

We must also make sure our farmers are giving consideration to the long-term condition of the soil on their land. To practice destructive policies of applying excessive amounts of chemical fertilizers can damage the soil, making it devoid of humus so that its future crop production capacity is decreased to a great extent. We have got to be concerned further than our own backyard - further in space and in time.

Some of recent national policies which have limited the marketing of our crops overseas are also an issue of concern. I have strong doubts that the increased amount of fertilizer would actually be applied to fields

which would produce food for starving people. Many of our crops have been held here and sometimes even allowed to rot.

The above reasons lead me to ask the following of the Secretary of Interior:

1. That the Secretary limit phosphate production to the current, or only slightly increased level in Eastern Idaho by granting the approval of mine plans only as they are needed to maintain this level.

2. That all present applications for prospecting permits be denied.

3. That the Interior Department observe and obey existing State of Idaho laws relating to protection of water quality and stream channels.

4. That the Secretary has a duty to protect the environment, as well as to permit orderly and timely mineral development.

The Department of the Interior is supposed to be our number one conservation agency, but they have shown little effort along the lines of conservation.

Under the Diamond Creek Plan, I ask for implementation of Level 2, Alternative D.

I feel that the responsibility rests on the Department of Interior to show the public that there is a definite and increasingly critical need for the phosphate fertilizers before they give the go ahead signal for increased development of our phosphate resources.

Karen Swafford
1045 Cathryn
Idaho Falls, Idaho 83401

Karen Swafford

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September 13, 1976

Interagency Phosphate Task Force
P.O. Box 250
Pocatello, Idaho 83201

Gentlemen:

The proposed phosphate mining in Eastern Idaho recently came to my attention through television and newspaper. A local T.V. station portrayed the impact the mining has had in Florida. Scenes showed thousands of acres of mutilated land from which phosphate had been removed. Residents on land now "reclaimed" are now faced with a high cancer risk due to radiation from the mined areas. The Post Register also carried a summary of the Environmental Impact Statement and frankly, the proposed mining appears to me to be disasterous.

Under the circumstances, I am strongly in favor of limiting phosphate production to current levels. Approval of new mines to maintain that level should be allowed only in areas where the least damage will occur. Each new mine which is evaluated with regard to the area in which it will be opened. While it is impossible to reclaim all mined land, mining companies should pick up the tab for reclaiming that land which can be reclaimed. Present applications for phosphate prospecting should be denied. All Idaho air and water quality laws should be strictly enforced where mines and processing plants now exist.

While I am a native of Idaho, I have lived in the East. The quality of life there has been degraded there for the sake of new jobs

No response required.

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and the money it will bring to the area. In no way will these two so called benefits make up for the damage to this beautiful area.

Sincerely,

Lance D. Perkins

cc. Cecil Andrus
[redacted] Church
George Hansen

Interagency Phosphate Task Force
P.O. Box 230
Pocatello, Idaho 83201

Gentleman,

This letter is to express my displeasure in the idea of increased phosphate mines in southeast Idaho. I feel the standard of living in Idaho ~~will~~ will be degraded with the increase in mining. My specific objections are:

1. A rapid and large increase in mining will produce an influx of population into Idaho. This will move Idaho further from a rural, living style where the air is clean, hunting and fishing is good and a person can trust his neighbor.
2. The quality of backcountry land about mines will be degraded by addition of roads, slurries, power lines and from the continual habitat of people.
3. Wildlife will be disrupted in the area. The addition of roads, destruction of winter range and continual presence of humans will reduce the game in southeast Idaho. As indicated by the 1976 Fish & Game Big Game Regulations big game ~~pop~~ population is down — additional pressure from phosphate

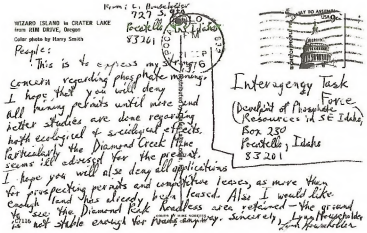
No response required.

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mines will degrade hunting.

I have little confidence in this letter providing the slightest weight in the phosphate mine decision. In fact, I have little confidence that government agencies do the best thing for the land and people. I do hope that this comittee has people who enjoy the untamed out-of-doors, and that these people recognize that money and expansion are no replacement for Idaho's wilderness.

Dale M. Snider
DALE M. SNIDER
660 JAMES A.
IDAHO FALLS, ID



No response required.

September 18th 1976

Dear concerned

this is a hard letter to write, but I feel it is important I let my thoughts be known. im not good with words but I hope my feeling shine trough this letter.

the idea of Phosphate mining is inevitable. being a son of a small farmer, and still helping dad with the farming I realize the importance of good, reasonably priced, fertilizer. We seen, first hand, the benifit or such things.

However, I am a lover of our hills. the very ones that hold captive the Precious Phosphate reserves.

On top of these reserves lies some of the purest streams, rangeland, wildlife cover in world. ~~contains the only area~~ I trust you know many more things about the top & bottom of these hills. than I do. But one item that sometimes gets overlooked is the pure beauty and heart-stirring sights, the thousands of hours & days & months- yes, and tears of warm, quiet, gentle, reverent feelings ~~of~~ that are born in these hills.

I ask that you donot spoil these places. Yes we need the phosphate, but we need the unspoiled hills & streams.

I have seen a few things in my lifes
ive seen people going with out food so that
others could eat, and others going with out
shelter so that their friends might be comforted.
Ive seen many many powerful deeds in action.

But there is one thing ive never seen
and that is; the businesses bending over backwards
to help people — I mean helping to
a point of risking their very existance.
sure they offer tokens of help but ive
never seen a bank in an old humble building
nor have I seen an enterprise concerned
about making money ever give much away.
Of course not. they aren't in it for
their hearth are they?

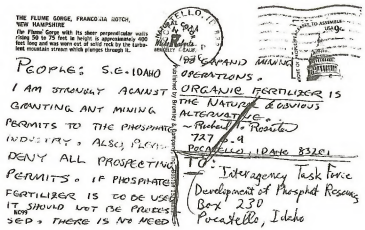
what I ask is that these cooperations
are regulated and restricted their mining, and
to demand much attention to the re-ccaiming
of the mined areas. to much could be
ruined by out & out rush to exploit this
resource. 1

I realize that the more restrictions placed
one on the minning, the higher the
price of the phosphate when we go to buy it.
however, I would rather have our hills still
beautiful and pristene that to have cheap
fertileer.

thank you for wading
through this letter

Steve Spencer
Rt #4 Box 449
Idaho Falls, Idaho 83401

1. Mining of phosphate on Federal leaseholds is regulated and reclamation is required under Federal regulations 30 CFR 231. Eleven specific measures that will be required, along with other measures that will mitigate impacts, are listed in Part 1, Chapter IV.


THE FLUME GORGE, FRANCONIA NOTCH, NEW HAMPSHIRE

The Flume Gorge with its sheer perpendicular walls rising 50 to 70 feet is a natural chasm over 800 feet long and was worn out of solid rock by the turbulent mountain stream which plunges through it.

POCATELLO IDAHO

PEOPLE: S.E. IDAHO
I AM STRONGLY AGAINST
GRANTING ANY MINING
PERMITS TO THE PHOSPHATE
INDUSTRY. ALSO, PLEASE
DENY ALL PROSPECTING
PERMITS. IF PHOSPHATE
FERTILIZER IS TO BE USED
IT SHOULD NOT BE PRODUCED. THERE IS NO NEED

RE: EXPAND MINING OPERATIONS.
ORGANIC FERTILIZER IS THE NATURAL & OBVIOUS ALTERNATIVE.
~ Preferred Route
727 S. 9
POCATELLO, IDAHO 83201

TO: Interagency Task Force
Development of Phosphate Resources
Box 230
Pocatello, Idaho

No response required.

4200 Ave A Apt 202
Austin, Tx
78751

9/16/76

Interagency Phosphate Task Force

Dear Sirs:

Please include this letter in the record of public hearings on the development of phosphate resources in Southeastern Idaho.

I am a former resident of Southeastern Idaho, and someday hope to return to enjoy the outstanding quality of life found in the area. Perhaps from a distance, I am even more aware of the unique character and quality of the region being considered for increased phosphate exploitation. I am deeply concerned about the effect phosphate development will have on environmental and social quality in Idaho. The draft EIS enunciates considerable adverse impact of the mining development. That these will be damage seems clear to everyone. What

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1. The points raised will be considered in the final decision.

must be done is to balance the costs and benefits of development, and require whatever development occurs to have minimal environmental and social impact.

Therefore I request that the Secretary of the Interior grant leases on an individual, as-needed basis. Clearly, this can be done under his statutory authority for environmental protection. With the phosphate market presently depressed, actions to grant vastly increased leases seems to verge on promotion rather than orderly development. I suggest each lease should be considered separately with full public input and NEPA process. In any case the rate of increase in production should be limited to modest increases above the present level as need becomes apparent — not vast speculative increases as now proposed.

Furthermore, I feel the role of phosphate exports should be an important part of consideration of mining increases. Since there appears to be no public input in determining export levels, the problem of exports should be considered in

leasing decisions. Many people are asking, "Why should Idahoans sacrifice their environment and quality of life to help the balance of payments?" If public involvement is to be meaningful, this question should be answered to the satisfaction of Idahoans before proceeding with new leases.

Finally, I would ask that whatever development ~~development~~ does occur strictly conform to Idaho air and water quality laws. It would be sad if phosphate production shifted from Florida to Idaho because of exemptions or lax enforcement of environmental laws.

Your decisions will have long reaching effects. Please remember that phosphate is a non-renewable resource, and therefore its development should be controlled with a long term perspective. Similarly, rushed development will permanently destroy a still relatively untouched remnant of natural America.

Thank you for considering these comments.

Sincerely,

John E. Hartman

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PS. Please keep me informed of developments affecting Caribou-Idaho.

419

September 27, 1976

Interagency Task Force on Phosphate
Development in Eastern Idaho
P. O. Box 230
Pocatello, Idaho 83201

Phosphate EMIS

Dear Sirs;

Please consider the following comments on the Draft Environmental Impact Statement, "Development of Phosphate Resources in Southeastern Idaho".

I am opposed to any significant increase in the output of Phosphate rock from Eastern Idaho, whether it is a tripling as proposed in the DEIS, or even less. This increase would cause environmental, economic, and social problems far greater than any benefits would justify.

The Department of Interior must become more aggressive in its protection of the environment, and less interested in assisting the exploiters of natural resources on our public lands.

The Secretary of the Interior must do the following:

1. Take steps to insure that phosphate rock production will be maintained at the current level in Eastern Idaho. This would involve delaying approval of mine plans until given mines were needed to maintain this level of output, and it would also involve giving consideration to the least impactive proposals first. Since Interior has as one of its minerals management objectives "protection of the environment", I certainly believe that you have authority to do this.

2. Require a separate EIS on each mine plan as it comes up, with opportunity for full citizen involvement.

3. Deny all applications for prospecting permits, Mines area leases, and competitive leases.

4. Insure that Idaho's air and water quality laws and standards will not be violated by any one mine project or by a combination of several.

5. Require that more money and effort be expended in reclamation and mitigation efforts related to existing mining operations.

The above recommendations, if adopted, would maintain phosphate at the current level, avoid growth problems (and probably also "bust" problems) associated with expansion, lengthen the life of the non-renewable phosphate resource, provide additional opportunity for public input, and give time and incentive for better mitigating some of the adverse impacts of both future and existing mining operations.

Idaho does not deserve the disaster which the sum of the proposed mines in the DEIS would produce.

Sincerely,

Gerald A. Jayne
1560 Lola St.
Idaho Falls, Id. 83401

1. All these alternatives and options will be considered by the Secretary of the Interior.

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September 28, 1976

Interagency Task Force
P.O. Box 236
Pocatello, Idaho 83201

Dear Sirs:

We have been reading about the phosphate mining problem for a number of months and have tried to decide what aspects of the situation concern us the most. As Idahoans we are, of course, concerned about the economy of our state and at first glance the phosphate mining sounded good to us.

However, we have now come to feel that not enough is known about what this mining will do to our area. We are concerned about the environmental degradation and about the impacts that increased population would bring. The Soda Springs area is unique for its serene setting and its fishing streams. We are concerned that all of this would be lost, or at least badly damaged by the mining industry and its associated processing plants.

Through it all, we keep asking ourselves how badly phosphates are really needed? Is it really worth the sacrifice we are being asked to make? We have heard various figures on phosphate needs in the future and then we have read that the mining companies don't now feel that the projected phosphate extraction would actually materialise. It seems we are being asked to give a blank check, so to speak, to the mining companies. Without knowing the real needs, we are being asked to leave the rate of extraction, the decisions and programs on reclamation of the land, and the building of various service roads and processing plants up to them. We feel, at this point, that we do not go along with this sort of blanket approval.

We suggest that some agency oversees the entire phosphate mining operation in southeast Idaho and schedules mining operations as they are needed and in the best interests of the total population. The people of Idaho and the losses they are being asked to accept should have equal weight as the phosphate needs of special interest groups. We envision charts depicting phosphate "needs" and salesmen out selling their product to farmers and others who are not, themselves, certain of their needs. Let's use our non-renewable resources with the most future-sighted vision we have.

Finally, we are particularly concerned about the Diamond Creek area. Very few spots on earth compare in beauty and recreational value. We oppose any mining operation, especially processing plants, railroads and service roads in the Diamond Creek area.

Yours truly,

David and Vivian Hull

David and Vivian Hull
Route 4 Box 167
Rigby, Idaho 83442

1. The alternatives available to the Secretary of the Interior are described in Chapter VIII. Your concerns will be considered.

September 20, 1976



Mr. Bill Schneider
Phosphate Task Force Leader
Bannock Hotel
Pocatello, Idaho 83201

Dear Mr. Schneider:

As residents of the phosphate development region in Southeastern Idaho, we note with interest, and some alarm, that the Idaho Fish and Game Department finds rather serious fault with the phosphate Draft Environmental Impact Statement prepared by the USGS Task Force on the grounds that it ill addresses the effects of the development on wildlife, and that it contains "a profusion of omissions, errors and misstatements relating to the involved fish and wildlife resources." We note further that the Environmental Protection Agency is critical of the document because of its lack of detail on pollutants, including radioactive elements, that will be released into the environment through the mining and processing of phosphate rock. Many commentators have criticized the sociological impacts of the proposed development and the possible "boom town" effects that it could bring to the local governments in the region, and have questioned the adequacy of the draft EIS on these grounds.

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In general, we agree with these criticisms, and feel that the draft does not explain these impacts in sufficient detail for reasoned and useful public review. We, too, are concerned for our land, water, wildlife and clean air, our communities and the quality of life that we enjoy in this part of Idaho. But as farmers and stockmen we wish to comment here principally on the report's appraisal of the impacts of the phosphate development on our farms and ranches, and on the agricultural economy of this region.

We were disappointed that the recent phosphate hearings were held at a time when few farmers and stockmen could attend, but we trust that this letter expresses our feelings and observations about rapid or expanded phosphate development in general and the Draft EIS in particular.

Although the statement discusses briefly the possible effects on some aspects of the agricultural economy in this region, it is, in our opinion, wholly inadequate in both its approach to this issue and in its presentation of useful information on agricultural impacts. For example, the draft statement states that approximately 74,000 acre feet
1 of water will be needed to operate the proposed beneficiation and calcining plants, and that another 14,500 acre feet will be needed annually to support the expected population increase in the area. Of this amount, some 30,000 acre feet must come from the Soda Creek drainage system. Using the figures presented in the draft statement, that would be an amount equal to three-fourths of the present annual

1. The DES does not intend to imply that the water will be diverted for phosphate mining and processing; the intent is only to inform the reader of the magnitude of water requirements if the projected quantity of phosphate ore is removed and processed. The legal problems attendant to acquiring the necessary water rights for the phosphate industry in Idaho could be of considerable impact, but cannot be evaluated within the framework of this study.

yield of that system. Most of this water has already been appropriated, much of it for agricultural use, and we must seriously question a proposal to divert water in these amounts for new industrial and domestic uses. The draft fails to explain to our satisfaction the legal implications of that level of diversion, detail the projected level of usurpation of existing water rights, or state clearly the effects of that diversion on agriculture in this region. This we believe essential to the adequacy of the final impact statement. 1

Also left unspecified in the draft is the exact acreage and location of agricultural land that will be adversely affected or destroyed by mining and processing. It is obvious that a great number of acres of both grazing and crop land will be withdrawn from agricultural use as a result of development. It is unlikely that much, if any, of this land will ever be returned to a productive use. As the draft statement indicates, there is no record of successful rehabilitation of lands disturbed by phosphate mining. And, in its discussion of water usage, the statement avoids any reasonable discussion of the impacts of the proposed land disturbance on the agricultural economy of the region. 2

Likewise, the impact statement gives no detailed or illuminating explanation of the probable effects on the farm economy of higher property taxes brought about by rapid population growth. According to figures presented in the impact statement, Caribou County will experience an 18.4% annual increase in population during the first five years of production. This doubling of our present population will require, within a very short time, virtually a duplication of all existing services and service-related capital investments, including sewers, fire protection and law enforcement facilities, roads, schools, hospitals, government offices, etc. The bulk of the financial burden for these new services and facilities will fall upon the major land holders in the region -- the farmers and ranchers. Nowhere in this statement is it explained how this fiscal strain upon our livelihoods and our communities is to be accommodated. We ask that the EIS explore the effects on the agricultural community and economy of the higher tax requirements brought by this sort of rapid development. It is essential that the statement address in particularity the costs of the various public services and facilities necessitated by phosphate production and the source of revenue to meet this expense. We seriously doubt that the revenues generated from the introduction of phosphate facilities will be sufficient to offset the increased costs. At the very least, we think it essential that the final statement address the degree to which industrial development will provide such an offset. 3

There can be no question that the increased demand upon public services will necessitate the issuance of numerous capital improvement bonds. We suspect that such bonds will exceed the legally permissable debt limits of local governments. We further suspect that in most cases the lives of many of the improvement bonds will extend beyond the lives of the mines and plants that are creating the need for such improvements. Thus, it will be left to the businesses, farms and citizens who remain after industry has reaped its fortune from beneath our lands and departed to absorb this enormous debt. In short, we find the draft statement pitifully deficient in its assessment of the economic impacts on the agricultural industry. It is our opinion that such analysis is 4

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2. Practically all lands involved are grazing lands. The acreages and locations disturbed by mining are shown on maps and listed in the text. Approximate acreages for proposed beneficiating plants are also listed in the text; exact locations cannot be specified at this time.

The phosphate companies are involved in rehabilitation programs that are indeed successful on mine dumps and other disturbed areas. Successful rehabilitation of pits, however, is very poor to non-existent. Pits, however, are only a portion of the total disturbed areas. The DES states in numerous places that vegetative production on rehabilitated areas will be reduced approximately 50 percent from the natural production before mining but with great variability from site to site.

3. A detailed analysis as requested is not possible at this time. Many of the concerns expressed here are discussed in the section on socioeconomics.

4. At the more probable level of mining, many of the items cited will not occur. To the extent possible, economic impacts on the agricultural industry have been assessed. In the preparation of the FES, assistance was obtained from the Department of Agriculture, University of Idaho.

imperative to the sufficiency of the final statement, and we request that we be allowed to submit additional comments on this aspect of the statement before its approval. 4

We know from personal experience that as a consequence of the introduction of phosphate processing to our region, high concentrations of fluoride will contaminate the vegetation and water in the vicinity of the plants. As you are aware, whole herds of cattle and sheep have been destroyed by contamination resulting from present production. The impact statement fails to explain to what degree these losses can be expected to increase as a result of expanded processing. Nor does it address the economic effects on our livestock industry of the special efforts (like finding range elsewhere) required to avoid fluoride poisoning in our livestock. We believe that the final EIS should project the economic effects of development due to the actual loss of stock and available range through fluoride poisoning. 5

Finally, the draft poorly explains, and hardly defends, the need for substantial increases in phosphate production in the United States in the period between now and the year 2000. We use phosphate fertilizers in our farming operations in this region, and recognize the importance of phosphate to agriculture in the nation as a whole. However, as the statement indicates, only about 10% of all the phosphate produced in this country is consumed for agricultural purposes, whereas about 40% of the total goes to detergents and water conditioners. This brings up some key questions, the answers to which are not found in the draft EIS. Is the increased production going to satisfy a demand for increased agricultural phosphate in the next twenty-five years? If so, what is the projected increase in that demand and what are the prospects that this increase will be offset by a decline in the use of phosphate for detergents and other industrial purposes? What is the precise role of Idaho's phosphate in the international market, and what end use will it be sold? The answers to these questions are, in our opinion, also essential to the adequacy of the final EIS. 6

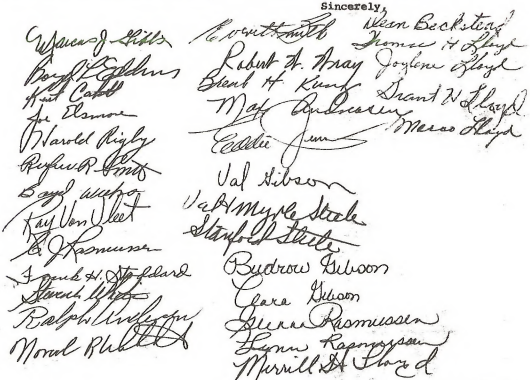
Despite the fact that agricultural need is being touted as a primary reason for increased phosphate production, it appears that the increase is being promoted to serve other, perhaps non-essential needs. It is well known that the use of phosphates in detergents is not only non-essential, but harmful to the environment as well. We strongly request that the final EIS make a careful study of the various end uses of phosphate, make some projections about the possible premature depletion of the resource because of these uses, and explain how that depletion will affect agriculture in Idaho and nationally.

5. An expanded discussion of the problems of fluorosis has been added to the text. This discussion was developed with the assistance of the county agricultural agents and the College of Agriculture, University of Idaho.

6. The disposition of the phosphate rock by use is described in Part 1, Chapter I-D-3. Because of high costs of rail shipment, it is unlikely that phosphate rock from Idaho will compete in the export market. The most recent projected demand is for an increase of about three percent per year overall. The known reserves of the Western Field are estimated at one billion ton, and resources at 6.7 billion tons. This is far in excess of that proposed for utilization by the year 2000 A.D.

We appreciate this opportunity to comment on the Draft Environmental Impact Statement, and hope that our comments will be taken into serious consideration in the preparation of the final statement.

Sincerely,



Farmers and Ranchers of the phosphate area

cc: Senator Frank Church
Governor Cecil Andrus
Senator James McClure
Congressman George Hansen
Secretary Thomas Kleppe
Dr. Vincent McKelvey
Idaho Farm Bureau
Idaho Cattlemen's Association

Sept 29, 1976
584 Sixth Iron Pl
Idaho Falls Id
83401

Interagency Task Force
P.O. Box 230
Pocatello, Idaho 83201

Dear Sirs:

In my own opinion I don't think the pros will outweigh the cons in the long run - will the environmental impact be worth the price of the phosphate? I realize that the phosphate is badly needed and that we really can't do without. The way I think the situation should be handled is to reclaim the used material to the best of our ability. It may not be the greatest and it may not work well, but it will be better than no effort at all. As it is now elk, deer, and moose have a hard time trying to find a way across the large pits. These pits could at least be filled in, instead of leaving them open in hopes of more profits to be made. The problem is, as that the company is to bent on making money and being selfish towards the wildlife. Is it really worth it? The destruction that is wrought might take nature thousands of years to reclaim. These are aspects to be considered while gouging a gash in the earth.

Sincerely Yours,
Carol Ryglik

No response required.

September 30, 1976

2255 Baltic Ave
Idaho Falls, ID 83401

Interagency Task Force
Development of Phosphate Resources in Southeastern Idaho
PO Box 230
Pocatello, ID 83201

Dear Sir:

The purpose of this letter is to transmit comments on the draft environmental impact statement (d.eis) on the development of phosphate resources in Southeastern Idaho. Please include this letter in the hearing record.

The impacts as discussed in the d.eis are so overwhelming that the only reasonable alternative to consider is one which proceeds with caution. By this I mean that phosphate mining in this area should not be radically accelerated, but should be maintained at the existing level of mining. In addition, those mines which would have the most serious impacts should either be delayed or totally eliminated from any program. The proposed Alumet mine in the Diamond Creek drainage is a potential mine which should always be a potential mine and not an operating mine. General comments on the potential impacts are given in the following paragraphs.

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1- Additional above-ground mining should not proceed unless satisfactory reclamation measures are provided for in the mining plans. The wildlife resource in the region is valuable from both an aesthetic and an economic viewpoint. While some of this resource will be lost under any mining plan, it is important that the loss be minimized. Reclamation is a "cost" of mining, and it should be included as a direct cost to the purchasers of the phosphate as opposed to an indirect cost to society in the form of a lost wildlife resource. I cannot imagine people in Southeastern Idaho finding "large or unusual mine pits" (p. 1-339) attractive if they have as an alternative the incredible wildlife resource which presently can be found in this area. All efforts must be made to minimize the impacts on this resource.

2- Likewise, precautions should be taken to protect the fishery of this region. It is not impossible to assure that mining wastes reaching streams will not seriously degrade the water quality. While such precautions may increase the price of phosphate, this is a cost attributable to mining and should not be borne in an indirect manner by society. The statement on p. 1-438, that "... Federal, State, and county laws will be violated" is an interesting admission. If it is a position of the Federal government that laws be upheld, then no mining plan which might violate such laws should be approved.

3- One of the most serious deficiencies of the d.eis is related to energy requirements. The discussion of electrical energy on p. 1-412 indicates that additional energy would be available from new facilities of Utah Power and Light Co. Locations of

1. Mitigating measures for reclamation are discussed in Part 1, Chapter IV. These include grading and shaping of dumps, backfilling of pits, salvaging of topsoil, and revegetation.

2. We agree that all applicable laws should be upheld. There is no intent to violate Federal, State, or local laws. There is always a probability, albeit small, that an accidental spill or similar event could occur which could affect water quality beyond allowable limits for a short time.

3. Since generation facilities would be for all overall uses and not soley for the phosphate industry, identifying facilities and impact relative to the phosphate industry would be impractical. Location of such facilities is based upon fuel, water and load center, although the load may be in one area, the new power plant may be built many miles distant. Demand on a coal fired steam plant would be cumulative with other industries in the immediate area.

these facilities should be discussed if such locations are known. The type of
3 generation facility should be identified and potential impacts should be discussed, especially if the facility is to be located in the mining region. The combination of mining and a coal-fired steam plant would significantly change air quality in the region.

The short discussion on natural gas requirements (p. 1-490) does not give recognition to the diminishing nature of this resource. Other demands for natural gas will continue and some consideration should be given to these demands instead of merely assuming there will be sufficient amounts for all.
4

Another energy related deficiency is the lack of discussion about the energy requirements for the additional 22,300 people who will accompany the increased mining activity. As a minimum, these requirements can be estimated based on the present residential per capita energy consumption.

In summary, I wish to restate my most immediate concerns about the proposed phosphate development:
(1) phosphate mining in Southeastern Idaho should be maintained at the existing level,
(2) those mines which would result in the greatest impact should be delayed or eliminated from development plans,
(3) the proposed mine on Diamond Creek should not be allowed to operate.

Sincerely yours,

James McFadden

J. H. McFadden

4. The diminishing nature of natural gas is somewhat seasonal and off set by interruptible contracts with large users. Additional information on total energy requirements has been added.

Doug Winterrowd
9/13/76

I submit to the task force the names of 32 citizens of the Boise area who are willing to testify today that they are satisfied with the environmental statement as drafted. However, in the interest of expediency we have drafted a joint statement which I will now read. I have failed to cite the references for the statistics, however I will supply these under separate cover by the September 30th deadline.

In consideration of the facts that phosphate mining is already controlled by 27 federal agencies regulating everything from revegetation of mined land to apparel worn by workers, that in 1975 phosphate mines contributed 1.3 million in tax dollars and furnished 5,200 jobs*, that phosphate is vital to Idaho and the U.S. agriculature as a fertilizer, that natural resources are one of the few means the U.S. has of balancing trade with other countries, and that rural areas should have a chance to support themselves instead of burdening populated areas.

No response required.

We the undersigned agree that continuation and federally controlled expansion of the phosphage industry in south-east Idaho is an acceptable practice.

*References to be supplied later.

In consideration of the facts that phosphate mining is already controlled by 27 federal agencies regulating everything from re-vegetation of mined land to apparel worn by workers, that phosphate mines contribute 1.3 million in tax dollars and furnished 5,210 jobs,* that phosphate is vital to Idaho and the U.S. agriculture as a fer - tilizer, that natural resources are one of the few means the U.S. has of balancing trade with other countries, and that rural areas should have a chance to support themselves instead of burdening populated areas,

We the undersigned agree that continuation and federally con- . trolled expansion of the phosphate industry in south-east Idaho is an acceptable practice.

NAME	ADD.	NAME	ADD.
Douglas Eastwood	Meridian	Sherry Mueller	Star
Reidel Terrebina	Meridian	[illegible]	Boise
[illegible]	[illegible]	[illegible]	Star
[illegible]	[illegible]	Karen Arnold	Boise
[illegible]	[illegible]	[illegible]	Boise
[illegible]	[illegible]	[illegible]	Boise
Lynn C. Hessing	Boise	[illegible]	Boise
[illegible]	[illegible]	[illegible]	Boise
[illegible]	[illegible]	[illegible]	Boise
[illegible]	Boise	Dan T. Hansen	Boise
[illegible]	Meridian	[illegible]	Boise
Bob Daly	Eagle	[illegible]	Boise
[illegible]	Boise	Mrs Cy Johnson	Boise
[illegible]	Boise	[illegible]	Boise
[illegible]	Eagle	[illegible]	Boise
[illegible]	Eagle	[illegible]	Boise
[illegible]	Eagle	[illegible]	Boise

* 1985 statistics

September 21, 1976

Dear Sirs:

The attached 36 signatures were collected under the pretense of rational land use. Due to the Schedule of the Public Hearing in Boise, Idaho, I could not come and speak for them. I do, however, wish to submit the signatures as a small sampling of general support in the Boise area.

I also wish to bring up a few points about parts of the public hearing which I attended. First, Governor Andrus strongly implied that the State did not have ample warning to prepare for these hearings. I believe the E.I.S. records over 70 meetings between the task force and State officials. That makes both he and I surprised. Secondly, I do not believe anyone brought forth the question of the value of the land. With an already estimated figure from the task force of 2.1 million dollars to conclude and almost another one million by private industry, I believe the actual value of the land is a pertinent question. Just because land belongs to the federal government doesn't mean that it is either free or sacred. The public pays whatever the value of that land for the privilege of holding it. Therefore, if we really believe in the capitalistic system, the federal government should sell the land in question to the highest bidder and use the money obtained to purchase some prime recreation land that is more accessible to the general public. Finally, I believe that in hearings of this type the tendency is to compare actual positive benefits to imaginary negative detractions. This tendency stems from the illusion that the environment in question is natural and all outside inputs can only detract. The fact that hunters are already shooting range animals, while sheep are eating their grass and the herdsmen are shooting the animals of prey compounded with occasional fisherman and lost tourists seems to invalidate a natural wildlife balance. 1

It therefore seems fitting to compare actual positive benefits with demonstrable negative reactions instead of the wildest dream of an over enthusiastic conservationist. If one is to dream, a plant site could turn into a game refuge instead of a nightmare.

Respectfully,

John Meredith

1. There seems to be some confusion here between Federal mineral rights and Federal surface ownership. The sale of Federal lands are not involved in the proposed actions; the sale of Federal mineral rights to private industry are involved.

In consideration of the facts that phosphate mining is already controlled by 27 federal agencies regulating everything from revegetation of mined land to apparel worn by workers, that phosphate mines contribute 1.3 million in tax dollars and furnished 5,200 jobs*, that phosphate is vital to Idaho and the U.S. agriculture as a fertilizer, that nautral resources are one of the few means the U.S. has of balancing trade with other countries, and that rural areas should have a chance to support themselves instead of burdening populated areas.

We the undersigned agree that continuation and federally controlled expansion of the phosphate industry in south-east Idaho is an acceptable practice.

NAME	ADD.	NAME	ADD.
Pat Brown	Boise		
La Vina Fisher			
John R. Carpenter	Boise		
Miriam M. Carpenter	Boise		
Lenard Fuller	Boise		
Dolores Fuller	Boise		
[illegible]	Boise		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]

In consideration of the facts that phosphate mining is already controlled by 27 federal agencies regulating everything from revegetation of mined land to apparel worn by workers, that phosphate mines contribute 1.3 million in tax dollars and furnished 5,200 jobs*, that phosphate is vital to Idaho and the U.S. agriculture as a fertilizer, that nautral resources are one of the few means the U.S. has of balancing trade with other countries, and that rural areas should have a chance to support themselves instead of burdening populated areas.

We the undersigned agree that continuation and federally controlled expansion of the phosphate industry in south-east Idaho is an acceptable practice.

NAME	ADD.	NAME	ADD.
Louise Hunsaker	Boise, Idaho		
Jim Lott	Boise, Ida.		
Joan L. Thomasson	Boise, Ida.		
[illegible]	Boise Idaho		
[illegible]	Meridian Idaho		
[illegible]	Boise, Id.		
[illegible]	[illegible]		
Lori Dunamon	Boise, ID		

It makes no difference to me if phosphate mining is continued in S.E. Idaho.

NAME	ADD.	NAME	ADD.
Ronald W. Mayer	Boise		
Mrs James Pratt	Boise		
John Shipley			
Cory Roberts	Meridian		
Penny Terry			
Ann N. Cary	Meridian		
Douglas F. Bellard	Boise		
Barry Mosher	Boise		
Shirley R. Allen	Boise		
Jean Barnett	Boise		

301 South 2nd West
Soda Springs, Idaho 83276

September 28, 1976

Director, U. S. Geological Survey
109 National Center
Reston, Virginia 22092

Dear Sir:

The purpose of this letter is to express that I am in favor of the further development of phosphate minerals in Southeastern Idaho.

Over the past two decades the production of phosphate rock in the United States has tripled. As long as the world population continues to increase and each new generation will try to achieve the same standard of living (if not better) as their parents had, we can expect the demand and production of phosphate rock will continue to increase.

No response required.

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If we can agree to this expected production growth of phosphate rock then why is the growth focused upon Southeastern Idaho? There are three important reasons that can answer this question: First, because of geologic structure, the major phosphate deposits in the Western United States is in and centered around Southeastern Idaho. Second, the development of phosphate rock in Idaho is more economical because the deposits in Idaho are richer in phosphate content and the electrical power for processing is cheaper. Third, as the phosphate deposits in the Eastern United States become depleated, the development of the Western Phosphate Field will have to continue to grow to supply the demand.

We do not realize all the different minerals that we use each day. We are fortunate that the United States is abundant in mineral resources which has greatly influenced its development over the last two hundred years. I want the phosphate industry to continue to

grow in Idaho so I can continue to work and raise my family in Idaho.

Sincerely yours,

M. D. Lauman

MDL/ds

I am a life time resident of Soda Springs for 27 years. I farm in the ten mile pass area just North fo Soda Springs. I enjoy the rural character of our area plus all the outdoor related activities our area provides. Thus, I am very concerned about an industry that would compromise our area economically as well as culturally.

According to the imract statement agriculture and the cattle industry will be directly affected by the amount of land and water avaliable and indirectly by the change in land, air, and water quality. This effect could be so great, " that those unable to change their operations may be forced to sell out." The reasons according to the impact sistement are; " Some watering facilities will probably dry up or be altered," also " stockmen have expressed the concern over the possibility of accident or death losses as a result of man-made hazards associated with mining operations." such as high walls, roads, fences, cattle guards, bog holes, and polluted water. "

" Fluoride emissions will likely increase with increased production unless stringent control measures are effectively enforced, " the report points out. " Air quality studies based on existing conditions indicate that fluorine emissions, primarily from existing fertilizer plants, will be above tolerable limits within a radius of about two miles of the plants. As a result, " further cases of fluorsis can be expected."

As a land owner and tax payer of Caribou County, I can only see that increased population resulting from the phosphate industry will increase agricultures' taxes. The impact statement relates, " The local impact will be felt primarily as a result of an increase in the property tax." These revenue increases are an offset to the increased costs that will occur for

Most of the comments presented here are restatements of or expressions of concern over impacts as stated in the DES. The alternative to defer action as suggested is one of the alternatives available to the Secretary of the Interior, as discussed in the FES.

the provision of increased police protection, education, and other local services." Therefore, the incoming population will place a great burden on an already over worked community servicesand facilities. According to the impact statement in Caribou County, " the population will soar 400% of the current population by the year 2000." As I see it, these type of statistics point to a " boom and bust" pattern we have experienced in the past with the closure of Central Farmers in Georgetown Canyon, El paso at Conda, and just recently the June lay off of 200 plus employees at the Beker plant . Another problem I see as related to agriculture is that there would be an increased demand for prime agricultural land, resulting in inflated land values. Again the statement indicates this will " probably increase taxes accordingly."

As a direct result of these taxes and dramatic population increases, " Some farmers and ranchers could be forced to convert their land from agriculture to other uses because of the economic impacts imposed upon them." Also the statement relates already scarce farm labor could become more difficult to find as result of a switch to industry related jobs. Further the impact statement relates that in Caribou County alone we can expect an annual growth rate of 18.4%. The statement compares Soda Springs with the lowered quality of life communities of Rock Springs and Gillette Wyoming. Hence, is the added growth worth the cost? In my opinion they are not, because the industry that brings the added problems does not pay its full share.

I think this can be pointed out as it relates to the transportation system in the county. The statement says. " The effects of this increased use will be reflected in greater vehicle running costs, increased number of accidents, travel days and impairment of user comfort convenience." These increased traffic loads will result in the break down of county highways that will require much maintence and vigorous highway construction. However, acc-

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ording to the Idaho Department of Transportation, federal and state funds are not adequate to even met today's level of deterioration.

Another area of recent concern is that of energy. According to the report the phosphate industry uses vast quantities of energy. Electricity use alone, " will increase about 40% over the base of the extended current rate." I wonder where they will get this energy and who will pay for it. Just recently the people of the Boise Valley voted against the coal fired power plant, Pioneer, in their area. And just recently-this week tobe exact, the permit to build the plant was turned down by the public utilities commission. Also in southern Utah the coal fired power plant has been dropped. This seems to be a mandate by the people of this general area that until clean sources of energy can be achieved they want no part of them.

Another thing that needs great attention and is discussed in the statementis water. Most of us are aware of the need to protect the life blood of Idaho. Without clean water we can not irrigate the fields or enjoy many recreational pursuits. Accoding to the study we could lose 25 % of the "recreational opportunities" in the study area. Also according to the study an estimated 9 % of the state's total acreage is found in the area. In addition," Quality water-based outdoor recreation resources such as Palisades, Blackfoot and American Falls Reservoirs and Bear Lake will probably become significantly more importantoutdoor recreation attractions inthe future." However, the statement relates that proposed mining will " reduce the quality and resources because of dust, odor, smoke, noise, air, water, and visual pollution caused by the disruption of people, machinery, equipment, utility, and man-made facilities. " Thus the recommended mining will affect game and fish both directly and indirectly. While the deradation of already scarce habitats depress available populations, more people brought in by the phosphate industry will seek recreation in the area. Thereby lowering the overall attractiveness and quality

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of life in our area. With the breaking of Baker's dike earlier this year it became obvious that accidents are possible as well as probable. I see no mention in the report of secondary dikes to eliminate this problem on the head waters of the Blackfoot River. It seems that a pit" 450 to 750 feet " below a major river could create some seepage and water contamination problems.

It seems to me that by granting additional permits we may be inviting industry to violate state and federal laws in regard to air, water, and wildlife quality. The study indicates that " fluorine concentration within two miles of the plants ranged from 170 to 1,100 p.p.m. in sage. "Also in relation to So_2 concentrations the statement says, " during the 4 months between January 1973 and February 1974, the 24 hour ambient standard was equaled or exceeded 10 times. " The statement goes on to say, " They do not presently meet nor are they expected to fully met Idaho's air quality standards for So_2, fluorine, or particulate emissions by the year 1995." In addition suspended sediment loads according to E.P.A. standards could be violated in streams severely disturbed by phosphate mining. And lastly an encroachment of the Endangered Species Act by destroying nesting grounds for whooping cranes. Not to mention the Idaho Stream Channel Protection Act and the Federal Water Pollution Act that would be unavoidably violated.

It seems clear to me the statement speaks for itself. That is , the only rational alternative at this time is Alternative #2 - defer action until more study can be done. I say this because the impact study if deficient in many areas. The examples are many: " Few data are available for small streams, that are most directly involved," " very little systematic survey and appraisal has been made of the cultural resources in the study area," in reference to Flourine " the amount currently being produced from phosphate rock is not known," " because current traffic volumes directly attributed to the

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phosphate operationsare not known," in relation to erosion " Data are insufficent to quantify accurately the regional effects, " Little or no data are avaliable on amphibians and reptiles," and etc. etc..

Thus with the phosphate market depressed and profits low I would think the companies involved would have no objection to Alternative #2. Especially when a company like Alumet is going to mine at a " 10.1 : 1 average stripping ratio" and other competive companies are stripping at a 2 or 3 : 1 ratio.

In ending, I see phoshate as a valuable resource. But at the same time I see a valuable area of many uses for many people being destroyed for a mineral that could be obtained some where besides the head waters of a priceless water shed. Why not balance our payments and obtain the ore from foreign countries, and keep our own as security against future natural resource boycotts like we have experienced in the past. Further I feel this Diamond Creek area is to fragile to be mined and should only be considered as a last resort.

Sincerely,
Preston Phelps

Soda Springs, Ida.
Sept. 25-1976

U. S. Geological Survey
National Center
Reston. Virginia
Commitee,

I am a life time resident (58 yrs.) of Southeast Idaho & have seen the development of the phosphate industry in our area. As a farmer I realze the important use of our natural resources. I also realize the profound impact mining exerts on our local economy. While I understand the effects to the economy industry has brought into this area & its advantages, it also breeds many adverse problems. Such as the problems created by bringing more people into our area which puts a burden on our educational systems, municipalities, transportation systems our energy uses, & finally our recreational resources.

I feel the E T S is a blanket coverage of all phosphate mining proposals in the area. I feel each mining claim has a different particular effect on each area. I think consideration to the impact on our environment should be considered. Some areas are more fragile than others. One of the main considerations should be the head waters of our water sheds & the effects it will have on down stream water quality. The upper Blackfoot water shed is one of the more unique water sheds in the United States for it's production of fisheries & big game habitat, & the agricultural impact it has on the area.

My feeling is that much more study on these effects should be considered before any consideration be given for future mining.

The transportation system into the upper Blackfoot River area could be very detrimental environmentally. This is due to distrubance of fragile areas by erosion, water pollution, dust, noise, and in general extra human use of the area. These effects would be diastrous to this area.

We have had experience in the past of effects of industrial air pollution & the contamination of our streams. Also the effects of the effluents from phosphate industry upon livestock & forage.

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The alternative to defer actions is one of the alternatives available to the Secretary of the Interior, as discussed in the FES.

I hope you will take into full consideration our concerns of the area involved. I feel we should carfully consider the exporting out of our non-renewable natural resources. If the time comes we need these resources for our own use, they will be there for future use. At the present time there is n ot that much market & demand that we need to destroy all our environment.

This, I feel the E T S is incomplete & requires many more studies of the environmental impact, that could be seriosly damaged by mis-management of our natural resources.

Sincerly,

Dogal Stiles

Grace, Idaho 83241
September 29, 1976

Environmental Impact Task Force
Bill Snider, Task Force Leader

I submitted this statement as a rancher with interests in Soda Springs and Diamond Creek.

First Diamond Creek looking at mine plans and prospect fileings and properties under lease --- starting at Timothy Creek there is a mine plan filed and a plant being considered of about 12,000 feet length. Of about half of this is our deeded land. This puts the mine in Yellow Jacket up south Coyote Creek [illegible] which is filed on and next Timber Creek and then the Head of Diamond Creek. This is the entire part of Diamond Creek - less as noted Coyote Creek. According to the maps and plans of Geological surveys this is the entire part of Diamond Creek with a 100 foot road bed plus a haul road.

Then to the North from Timothy Creek to the Tincup Road - this valley east is under the same conditions as Diamond Creek.

The West side of Upper Valley down Rasmussen Valley Ridge (more or less connecting across the valley) then to the Ballard Line and it almost continues to Henry, Idaho joining the Blackfoot (Henry) Resovoir.

The mine plans of the mine and plant are about 300' above the head of the Blackfoot River. It was stated at a recent meeting in Soda Springs that this mine would be mined to its full depth - which is possibly to be several hundred feet below the elevation of numerous springs in the vicinity and probably the Head of the Blackfoot River. We have already had numerous experience with the mines drying up our springs and reducing the flow of streams due to drilling.

This impact statement does not state what is to be done to relocate the livestock permittees that use the forest lands in Diamond Creek (the cattle allotments we presumably hold, or the sheep allotments held by others.) This would also be the case with Lanes Creek, Rasmussen Valley, Long Valley, and especially the Woodsll Mountain, Trail Creek, Woods Canyon and others.

The Diamond Creek and Lanes Creek are the biggest source of the Blackfoot River and could very well reduce the quality and most certainly the quantity of the River. This River is mostly owned by the Bannock Shoshone Indians and the Blackfoot Farmers. I read nowhere is there a mention of these water holders.

As to the land - it would take millions of years for some of this land to be brought back into production - and it past experiences are taken into consideration it would take hundreds of years and thousands of dollars to even do much improvement and in most cases the brunt of this expense would be paid by the Government and the taxpayers.

The loss of water, land use for recreation and livestock - for Diamond Creek far out way the mining and any plants with there contamination that it would displace.

1. An analysis of impacts at a more probable level of mining of 15 million tons by the year 2000 A.D. has been added.

2. The authoring agencies have made concious effort to maintain a totally objective writing style and tone, neither advocating nor opposing the actions proposed.

3. Section VIII, Part I, addresses the impacts of alternatives to all proposed actions, including the mining and reclamation plans for continuing the existing operations.

If Diamond Creek and Lanes Creek in particular are allowed it could even stir up problems that very well could be the cause of laws and restrictions by the environmentalists that could hinder a mine plan where they would be less harmful.

There are other critical areas that should not be allowed that are just as fragile such as soils and other harmful things to fish habitate and especially the game migration routes, summer and winter grounds.

The second part of this statement deals with our watershed - where our water orignates. The denuding of the mountains like Woodall Mountain will soon be in Trail Canyon and Woods Canyon which is the source of our irrigation water and the City culinary water and most of the near vicinity of Soda Springs. The loss of this due to plant immissions causing the snow to melt and the denuded mountians to hold back the winter snows and rains would be everyones loss - especially the city. SAME OF THAT ON WATER

I cite Montpelier Canyon, Geaorgetown Canyon, the break in Bekers holding ponds, and flourine emissions and other mistakes.

I have lived and farmed and have summered cattle in Diamond Creek (except for a few years in the army during World War II) since 1934. I know the game trails, migration routes, the high and lows of the game and fish population.

There is one observation that I see due to new roads, more use of the roads, heavier use of the fishing streams and hunter use, and the unplanned way the plants situated - caused the natural game trail to be changed. Added to this is heavier use of the foothill for farming and now many new homes being built out in the game wintering ranges and in some cases dogs, or offroad vehicles chasing the game causing large losses to them.

We should take a closer look into these things - have minning where it can be done but carefully planned and a moritorium on any increased production of mines or plants; have better education of people to where they build. THEN AND ONLY THEN should we allow any new mines or plants.

If I can be of any help to anyone in this field including the task force I would gladly try to help in any way I can.

Yours truly,

Val M Steele

Val M Steele
Box 358
Grace, Idaho 83241

1756 Monte Vista
Pocatello, Idaho 83201

September 29, 1976

U. S. Geological Survey
National Survey
Reston, Virginia 22092

Dear Sirs:

Comments on the Southeastern Idaho Phosphate Environmental Impact Statement have been requested.

First of all, credit will have to be given to the study team for gathering, sorting, analyzing and preparing a tremendous volume of material under a short time schedule.

Second, the whole situation was taken out of context by Idaho State officials, environmentalists, the Fish and Game Department and the news media. That is, the USGS requested mine plans to be submitted by anyone who might have some idea of mining in the area; these plans had to be submitted by year-end 1974. The plans submitted covered new and extensions to present operations over the next 20 or more years. Almost immediately officials, environmentalists, and the news media made statements that the whole of Southeast Idaho would immediately be ravaged by mining. The time frame for mining operations was completely disregarded.

No response required.

Thirdly, in several instances it appears that minimum data was stretched to cover assumed cases of what might be; specifically, in cases of stream sediment load and wildlife losses.

Fourth, the entire context appears to be from a negative standpoint; beneficial aspects related to jobs, and people are rated as almost unimportant.

I would hope that some of these similar problems can be circumvented in the forthcoming EIS studies related to coal in Wyoming. However, the setting appears similar but the actors will be different.

Very truly yours,

Merle L. Newell

Merle L. Newell

Mink Creek Road
Pocatello, Idaho 83201

September 29, 1976

U. S. Geological Survey
National Survey
Reston, Virginia 22092

Dear Sirs:

The following are my comments to the draft EIS, Development of Phosphate Resources in Southeastern Idaho. It is my understanding that any EIS is to address both the negative and positive impacts on an area. It is my opinion that this statement is extremely biased in the negative. I feel the statement has failed to properly address the following:

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1-152 - You state, "the presence of phosphoria nutrients are favorable to fisheries and quality of the water resources has not been greatly degraded to date by phosphate mining and ore processing." Since mining of phosphate has been in progress in this area for over 30 years and during many of these years there was little or no regulation on water quality, why then will future mining, with a great many new restrictions and controls, destroy the fisheries? Is it because the water will be so clean as to starve the fish? 1

1. Future mining will have a much greater effect than in the past as it will be much more intensive and in areas where water quality, stream alterations and other environmental degrading factors may occur. This has not been the case in the past.

1-389 - paragraph 2 - You address the negative impact on the farm labor employer due to increased wages necessary to compete with industry but you neglect to address the favorable impact on the employee of the increased wages. He too is a part of the society. 2

2. This has been added to the text.

1-411 - paragraph 3 - You failed to explain why the State Transportation Department wanted to increase the state gasoline tax during the gas rationing because of the loss of revenue due to drop in travel. This paragraph implies increased travel is costly to the state. 3

3. The rational of the State Transportation Department for wanting to raise gasoline taxes during gas rationing, presumably during World War II when gas was rationed, is not considered germane. We do not see any implication in this paragraph that increased travel is costly to the state.

In all cases you address the area mined to the recreation area in the EIS. Why do you not compare it with the vast acreages of recreational area of the entire state? 4

4. Inasmuch as the outdoor recreation demands are predominately regional with little influx of tourists from outside the region, the impact is regional in nature.

5. You do not address the impact on mid-western states that have very little recreational land and greater populations than Idaho and may have to cultivate these recreational lands to sustain a profitable operation if economically competitive fertilizer is not available.

6. You do not address the impact on the national economy of exporting phosphate to Canada for the utilization of their natural gas to produce certain nitrogen fertilizers that are consumed in the United States.

7. I do not find where you address the positive impact of the use of fertilizers which tend to stabilize weak soils and thus decrease the siltation of rivers and erosion of vast acreages of agricultural land.

8. I do not believe you adequately address the impact on the economy of Idaho's major industry, agriculture, if the cost of fertilizer is increased.

9. I do not find where you explain why disturbing the Phosphoria Formation by mining and stockpiling will cause this material to give up more heavy minerals to ground water than it does in its present state.

10. You do not explain why cars, roads, and equipment will chase the elk out of the country when, some 150 miles to the north in Yellowstone Park each year hundreds of thousands of people with continuous caravans of cars and campers, honking horns, barking dogs, screaming kids, and snapping cameras seems to have no adverse effect on the elk herds. The major problem being an over population of elk, some of which have to be destroyed every few years to keep the herds under control.

Thank you for this opportunity.

Yours truly,

Russell J. Hayden

Russell J. Hayden
Mink Creek Road
Pocatello, Idaho 83201

5. The question of economically competitive fertilizer is largely governed by the supply and demand within the fertilizer industry. The Task Force does not feel that this is germane to the actions considered in this EIS.

6. In 1975, about 735 thousand tons of fertilizer, of which half was phosphate, were imported from Western Canada. At the same time, Western Canada imported 100 thousand tons from the United States.

7. We did not discuss many of the indirect or secondary impacts relating to the use of phosphate. Our primary interest was the specific study area. This benefit would fall into the general category of beneficial uses covered in Part 1 of the EIS.

8. According to University of Idaho agricultural economists, such information is unavailable at this time.

9. We have recognized that natural processes are at work in transporting solutes and particulate materials from the phosphoria deposits. However, the rates of such mechanisms will be greatly accelerated by the mining operations, which produce more easily transportable sediments and increase the surface area of fresh weatherable material. Despite these factors, however, we have tried to maintain proper perspective by indicating that natural factors will mitigate many of the impacts.

10. The behavior of the Yellowstone elk herd is entirely different than the behavior of the elk in the phosphate area. Environmental conditions and people activities such as poaching, hunting and human harrassment are also different. Deer and elk, when in undisturbed habitat, are wild creatures. When placed in secure areas with high numbers of people, they become adjusted. This is not a likely prospect in southeastern Idaho.

337 North Hayes #2
Pocatello, Idaho 83201

September 29, 1976

United States Geological Survey
National Survey
Reston, Virginia 22092

Dear Sirs:

I am submitting this letter as testimony on the EIS, Development of Phosphate Resources in Southeastern Idaho.

1. I feel the statement has misstated what the actual mining rate is going to be in the area. There isn't going to be the big boom that is predicted in the statement. There isn't any market to support such a large expansion. As a result, all impacts predicted by the statement are exaggerated. The entire statement needs to be adjusted to reflect what the actual impacts are going to be rather than the maximum case used in the draft.

2. In addition, the statement is written in a negative tone with respect to the proposed mining. I feel that there are positive aspects of the phosphate mining that should also be emphasized.

3. Negative impact of proposed mining by the companies that are presently in operation should be evaluated against the alternative of closure of their mines, plants, and the resulting negative social-economic impact. The draft only considers the loss of reserves, AUM's, etc., and not the loss of jobs.

Sincerely,

Robert N. Whittemore

1. A discussion of mining at a more probable level of 15 million tons by the year 2000 A.D. has been added.

2. The positive aspects--the use in fertilizer, employment, and contribution of the industry to the economy--are discussed in various places in the statement.

3. The closure of the industry has not been considered as likely inasmuch as there are significant reserves under private control that could sustain the industry if mining of the Federal leases were curtailed.

GLENN JOHNSON
103 SOUTH MARKET
BONDVILLE, ILLINOIS 61815

1 Nov. 1976

Executive Officer
Interagency Task Force
on Phosphate Mining
in Southeastern Idaho
PO Box 236
Pocatello, Idaho 83201

Dear Sirs:

I read with interest an article in "Illinois Wildlife", a conservation publication, that additional permits may be issued for the mining of phosphates in the Caribou National Forest. I strongly urge that the permission be delayed until the US Fish and Wildlife and the Idaho Game and Fish Commission have ample time to determine the impact of the mining. As I am sure you are aware, the whooping crane and some of the peregrine falcons live in the mining area and may be seriously affected.

No response required.

Similar mining operations in Florida have accidentally posed serious problems to area residents in the form of water and other polution. A study is underway in Florida, and a delay on your part at this time would allow those findings to be reviewed in arriving at your final decision.

Thank you for taking the time to read this letter, and I again urge that the permission to mine be delayed pending further study

Sincerely,

Glenn R Johnson

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* U.S. Government Printing Office: 1977-780-202/213 Region 8

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